Titeflex Supplier Quality Requirements

Revision History

<table>
<thead>
<tr>
<th>Rev</th>
<th>DC #</th>
<th>Date</th>
<th>Rev</th>
<th>DC #</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>DC-1412</td>
<td>11/26/14</td>
<td>R</td>
<td>DC-2187</td>
<td>3/10/17</td>
</tr>
<tr>
<td>P</td>
<td>DC-1697</td>
<td>9/02/15</td>
<td>S</td>
<td>DC-2468</td>
<td>10/4/17</td>
</tr>
<tr>
<td>Q</td>
<td>DC-1920</td>
<td>4/15/16</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Current Revision Summary

<table>
<thead>
<tr>
<th>Paragraph</th>
<th>Change Summary</th>
<th>Reason for Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Para. 3.0</td>
<td>Added QP 8.4.3-6 (SIP) Updated QP&amp;QWI Reference numbers</td>
<td>Additional Info</td>
</tr>
<tr>
<td>Para 4.0</td>
<td>Added Definitions of SIP and CUI</td>
<td>Additional Info</td>
</tr>
<tr>
<td>Para 5.3</td>
<td>Added Titeflex Quality and Delivery Expectations</td>
<td></td>
</tr>
<tr>
<td>Para 6.7.3</td>
<td>Updated Reference Document Numbering</td>
<td>Updated numbering</td>
</tr>
<tr>
<td>Para. 6.8.3</td>
<td>Note added that this section does not apply to distributors</td>
<td>Additional Info</td>
</tr>
<tr>
<td>Appendix A (Q102)</td>
<td>Change from &quot;The Requirements of para. 6.8.3 Does not apply to orders invoking this QC Clause&quot; to &quot;First Article requirements per section 6.8.3 do not apply to orders invoking this QC Clause&quot;</td>
<td>Clarity of requirements</td>
</tr>
<tr>
<td>Appendix A (Q206)</td>
<td>Correct reference in section 6.9 to 6.4.2</td>
<td>Correction</td>
</tr>
<tr>
<td>Appendix A (Q213)</td>
<td>Format correction</td>
<td>Correction</td>
</tr>
<tr>
<td>Appendix A (Q214)</td>
<td>Added new clause covering NIST DFARSS requirements</td>
<td>New requirement</td>
</tr>
<tr>
<td>Appendix A (Q300)</td>
<td>Removed from clause (Nadcap Approved Material Test Lab per AC7004 or be)</td>
<td>Added in error</td>
</tr>
<tr>
<td>Appendix A (Q305-1)</td>
<td>Change from &quot;The requirements of SR-059 Aerojet Rocketdyne apply&quot; to &quot;When Aerojet Rocketdyne specification SR-059 is invoked by reference on purchase order, it applies&quot; (…to Aerojet Rocketdyne designed parts only, Not all AR programs flow SR-059)</td>
<td>Not all AR programs flow SR-059</td>
</tr>
<tr>
<td>Appendix A (Q305-1)</td>
<td>Change &quot;PWA310&quot; to &quot;RFPWA310 or RFPWASP310&quot;</td>
<td>Consistency to like requirements</td>
</tr>
<tr>
<td>Appendix A (Q305-1)</td>
<td>RF0004-526 - Cross-Reference Index for Heritage Pratt &amp; Whitney Specifications, and RF0008-000 WPB Cross-Reference Index for Heritage PW Quality Procedures, Methods &amp; Standards</td>
<td>Aid in correlation to requirements</td>
</tr>
</tbody>
</table>

PROPRIETARY DATA NOTICE TO ALL RECEIVING THIS DOCUMENT

The information contained in this document was developed at the private expense by Smith Tubular Systems-Laconia. The contents are deemed proprietary and all patent rights are reserved. Any submission is in a spirit of confidence and acceptance is deemed to be an acknowledgment of the confidential relationship. Information contained hereon not lawfully obtained from another source shall not be released, duplicated, used or disclosed in whole or in part for any procurement or manufacturing purpose without the prior written permission of Smith Tubular Systems-Laconia.
<table>
<thead>
<tr>
<th>Appendix A (Q306)</th>
<th>In second table replace all &quot;Form P&amp;WC 11165&quot; with &quot;ASQR-01 Form 4&quot;, Replaced clause SQOP 09-01 with SCOP-DQR</th>
<th>Customer Consolidate requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appendix A (Q306-1)</td>
<td>Replaced Form P&amp;WC 11165 with ASQR-01 Form 4, replaced AQOP 09-01 with SCOP-DQR</td>
<td>Customer Consolidate requirements</td>
</tr>
<tr>
<td>Appendix A (Q308)</td>
<td>Replaced SQOP 09-01 with SCOP-DQR in 2 places</td>
<td>Customer Consolidate requirements</td>
</tr>
<tr>
<td>Appendix A (Q310)</td>
<td>Removed Dated Sept 2008 and removed &quot;Evidence of Approved …shipment&quot;</td>
<td>Update to current</td>
</tr>
<tr>
<td>Appendix A (Q311)</td>
<td>Added Every article of foreign origin imported into the United States shall be marked with the country of origin in accordance with U.S. Customs regulations 19CFR134.</td>
<td>Updated requirement</td>
</tr>
<tr>
<td>Appendix A (Q311)</td>
<td>Added Statement that needs to be included on all paperwork for product from suppliers</td>
<td>Boeing requirement</td>
</tr>
<tr>
<td>Appendix A (Q312)</td>
<td>Changed all reference of Messier Dowty to Safran Landing system, First bullet change &quot;This Purchase Order is for a Messier-Dowty contract and the requirements of PRIDE MANUAL SQREQ-001 and GRP-0087 apply&quot;, to &quot;This Purchase Order is for a Safran Landing Systems contract and the requirements of SREQ-SLS-001 and GRP-0087 apply&quot;. Changed 3rd bullet from SREQ-MBD-002 to SREQ-SLS-002</td>
<td>Per Customer</td>
</tr>
<tr>
<td>Appendix A (Q313)</td>
<td>Removed all Volvo call outs, replaced SQAR 210 and SQAR 211, Change header in table from &quot;Volvo (PWA &amp; GE Product) Requirements&quot; to &quot;GKN Aerospace Requirements based on Design Authority&quot;, In Table - change sequencing to GE/PWA/RR(add)/MTU, In Table - Line 2: for PWA Designed Part change from &quot;SQAR 210 Appendix C&quot; to &quot;SQAR 211 Appendix B&quot;,</td>
<td>Corrected to current</td>
</tr>
<tr>
<td>Appendix A (Q314)</td>
<td>Removed all references to &quot;Vought&quot; in Title, Clause and Table header</td>
<td>Legacy unnecessary</td>
</tr>
<tr>
<td>Appendix A (Q317)</td>
<td>Second bullet change &quot;(Dated 2009)&quot; to &quot;Dated 2017&quot; and change from &quot;A thru A&quot; to &quot;A thru H&quot;</td>
<td>General update</td>
</tr>
<tr>
<td>Appendix A (Q318)</td>
<td>Removed 2nd bullet</td>
<td>Requirement can no longer be verified.</td>
</tr>
<tr>
<td>Appendix A (Q324)</td>
<td>Added &quot;Every article of foreign origin imported into the United States shall be marked with the country of origin in accordance with U.S. Customs regulations 19CFR134.&quot;</td>
<td>Wording optional. From Boeing PO Note C35.</td>
</tr>
<tr>
<td>Appendix A (Q328)</td>
<td>Prefix DOC 253-01 with &quot;Special Provisions&quot; and suffix it with &quot;Quality&quot;</td>
<td>Specificity</td>
</tr>
<tr>
<td>Appendix A (Q328)</td>
<td>Removed last bullet in its entirety</td>
<td>QC049 was retired 7-20-2014</td>
</tr>
<tr>
<td>Appendix A (Q331)</td>
<td>Replace &quot;WI 7.42-200&quot; with &quot;2-OF-01422&quot;</td>
<td>General update</td>
</tr>
<tr>
<td>Appendix B DFARSS</td>
<td>Removed DFARSS clause 252.204.7012 as it may be flowed separately in the PO</td>
<td>Not a general req.</td>
</tr>
</tbody>
</table>
1.0 **PURPOSE** – This procedure defines the Quality Requirements that are applicable to products and processes purchased by Smiths Tubular Systems (d/b/a Titeflex Aerospace) as identified on the supplier Purchase Order.

In addition to the General Quality Requirements contained herein, Supplemental Supplier Quality Requirements are defined by clause codes, which are applicable when identified specifically in the supplier Purchase Order. These clause codes are presented in Appendix A of this document.

**Note:** All changes to this document will be noted in *Blue* and with a change bar.

2.0 **CUSTOMER APPROVAL** - The procedure does not require customer or regulatory agency approval prior to implementation or change.

3.0 **REFERENCE DOCUMENTS** - The following documents form part of this procedure to the extent specified herein:

- ANSI/ASQ Z1.4 - Sampling Procedures and Tables of Inspection by Attributes
- AS9100 - Quality Management Systems – Requirements for Aviation, Space and Defense Organizations
- AS9102 - Aerospace First Article Inspection Requirement
- AS9120 - Quality Management Systems – Requirements for Aviation, Space and Defense Distributors
- ISO 9001 - Quality Management Systems – Requirements
- VIR – Vendor Information Request Form, LSQ-2100-2
- QP10.5 - Corrective Action
- QWI10.2 - Corrective Action
- Form QWI10.2-1 Supplier Corrective Action Request (CAR)
- QWI8.5.3-2 Protecting Intellectual Property and Proprietary Data
- QP 8.4.3-6 - Supplier Improvement Plan (SIP)

3.1 **ACRONYMS:**
- MRB – Material Review Board
- QWI – Quality Work Instruction

4.0 **DEFINITIONS**

**General Supplier Quality Requirements** – Supplier quality requirements that apply to all Titeflex purchased products and processes in which QP2100 is imposed in a purchase order.

**Supplemental Supplier Quality Requirements (Appendix A)** – Specific quality requirements defined by clause codes that are in addition to the general requirements and that are selectively imposed by reference in a purchase order.

**Supplier Improvement Plan (SIP)** – Action plan tailored to specific associated with a supplier, used when a supplier continually falls short of Titeflex established goals as a tool to outline actions for improvement. Suppliers must conform to expectations in order to retain their Approved Supplier Status.
Special Processes - Processes whose outputs cannot be fully verified before being released to the customer. Special processes are defined by industry and aerospace customer specifications and often require validation by means of confirming, qualifying, or otherwise proving that a process is capable of producing intended results. In many cases, regulatory and/or customer approval is required before a supplier can perform a special process.

Examples of Special Processes include:
- Non Destructive Testing: Radiography, Fluid Penetrant Inspection, Ultrasonic Testing, etc.
- Welding / Brazing: Manual/Orbital Welding, Induction/Torch Brazing, etc.
- Heat Treating: Annealing, Aging, Hardening, Furnace Brazing, etc.
- Chemical Processing: Passivation, Plating, Chemical Film, Anodize, Dry Film Lube, etc.

5.0 RESPONSIBILITIES

5.1 Titeflex Quality is responsible for maintaining this document and for providing any clarifications to requirements as requested by Titeflex suppliers.

5.2 Titeflex Purchasing is responsible for providing this document to Titeflex suppliers for which QP 2100 Supplier Quality Requirements is imposed via purchase order.

5.3 Titeflex Suppliers are responsible for reading, understanding, and making provisions for the requirements of this document and for assuring compliance to all applicable requirements imposed by the purchase order. Titeflex Suppliers are also responsible to produce all required records and documentation and provide to Titeflex at time of product shipment. Titeflex expects suppliers to maintain a Quality and Delivery Goal of 95% or better. Failure to maintain goals could be addressed with a Supplier Improvement Plan (SIP) and/or a Corrective Action.

6.0 GENERAL REQUIREMENTS

6.1 Applicability

The general requirements contained in this document are applicable to Titeflex purchased production materials, components, assemblies, supplies, and processes that become a part of the product that Titeflex delivers to its customers.

These requirements do not apply to MRO purchases of materials, tools, and services such as shop wipes, cleaning solutions, abrasive wheels, hand tools, calibration services, equipment lubricants, tapes, etc. that do not become a part of delivered product.

6.2 Quality System Requirements

6.2.1 Quality Management System (QMS): Titeflex requires its suppliers to maintain a Quality Management System certified by a third party registrar as follows:
- AS9100 Quality Management System – suppliers of detail components and subassemblies
- AS9120 Quality Management System – suppliers acting as distributors
Titeflex Supplier Quality Requirements

- ISO 9001 Quality Management System – suppliers of industry standard parts and special process providers

The Titeflex Senior Quality Authority (or delegate) must specifically approve suppliers that do not have a certification to the above Quality Management System (QMS) requirements.

It is the supplier’s responsibility to maintain their QMS certification throughout the performance of all work associated with a Titeflex Purchase Order. Any changes in a supplier’s QMS certification status such as loss of certification or change of scope must be reported immediately to the Titeflex Senior Quality Authority (or delegate).

Titeflex reserves the right to perform on-site audits and assessments at the supplier’s facility and at any sub-tier suppliers performing work to satisfy a Titeflex purchase order.

6.2.2 Reporting of Significant Changes: Titeflex suppliers are required to notify Titeflex Quality of any significant changes to their business while performing work under a Titeflex purchase order. Significant changes include:

- Changes in business name, ownership, leadership personnel, quality management
- Changes in facility location, movement of manufacturing/test processes and equipment, implementation of new manufacturing/test processes and equipment
- Changes in Certification / Accreditation status, Loss or Suspension of QMS Certification (ISO 9001, AS9100), Nadcap Accreditation or Customer Approvals

6.2.3 Unauthorized Changes: Titeflex suppliers are not permitted to make the following changes without written authorization from Titeflex Quality:

- Outsourcing of internal processes (Machining, Welding, etc.)
- Material or part substitutions

6.2.4 Right of Access: Titeflex and its customer representatives and regulatory authorities shall have right of access to supplier (and sub-tier supplier) facilities, documentation, procedures, and records associated with any activities performed for the fulfillment of Titeflex purchase orders. Titeflex suppliers are required to flow down this right of access requirement to their sub-tier suppliers.

This right of access requirement covers (but not limited to) the following activities:

- Problem/failure investigations, corrective action investigations, nonconforming material containment, action follow-up activities
- Audit activities
- Requirements reviews, design reviews, risk assessments, production readiness assessments, capability/capacity analysis
- Source inspection and verification activities
- Witnessing of production processes, testing, and inspection
- Continuous improvement training and project activities

6.3 Purchase Order Requirements:

6.3.1 Titeflex Supplier Responsibilities: Titeflex suppliers are responsible for the following:
Titeflex Supplier Quality Requirements

- **Requirements review and planning**: Establish procedures and practices that ensure performance of a timely and thorough review of all Titeflex purchase order requirements including all requirements defined in multi-level drawings, specifications, and this QP 2100 document.

- **Product realization**: Perform processes and produce product that meets all of the requirements specified in the purchase order.

- **Sub-tier supplier requirements flow-down**: Flow-down via purchase order the appropriate requirements of the Titeflex purchase order requirements to all sub-tier suppliers including end-user customer requirements and quality clauses.

- **Quality of products/processes**: Establish quality verification practices and controlled processes to ensure requirements compliance of all products and processes provided to Titeflex purchase orders. This includes products and processes purchased from any sub-tier supplier including customer-designated sources.

### 6.3.2 Drawings, Specifications, and other documentation:

Titeflex shall provide suppliers copies of or access to the applicable Titeflex and/or customer technical data (drawings, specifications, bill of materials, procedures, etc.) invoked by the purchase order per QWI. The supplier is responsible to validate that they have and are working to the revision level of the technical data that is required by the purchase order or that was current at the time of purchase order placement.

Titeflex suppliers are responsible to maintain an effective configuration management system to assure proper revision control for all technical data associated with Titeflex purchase orders and to provide applicable technical data to their sub-tier suppliers.

Titeflex cannot provide suppliers copies of industry standards such as AMS, AN, ANSI, AS, ASTM, Fed-Std, ISO, J-Std, Mil-Std, MS, NAS, etc. These types of documents are copy righted and can be obtained from the applicable controlling agencies.

### 6.3.3 Information requests, interpretations, and clarifications:

Titeflex suppliers are encouraged to seek clarification of requirements or request additional information relative to purchase order requirements by contacting the cognizant Titeflex purchasing agent. Information requests and clarifications associated with technical data requirements are to be documented on a Titeflex Vendor Information Request (VIR) form and sent to Titeflex purchasing. Titeflex purchasing will communicate and coordinate the VIR issue/request with appropriate Titeflex engineering and quality personnel and provide the resulting response/information to the supplier. A VIR may be used to communicate a requirement compliance issue to Titeflex with the intent to seek guidance and further action, however, a VIR cannot be used as an authorization/approval for nonconforming material.

### 6.3.4 Requirement conflicts and order of precedence:

In the event that there is a conflict with requirements that are invoked by a Titeflex purchase order, the supplier is to seek clarification from Titeflex using the VIR process. The following requirements order of
6.3.5 The Supplier shall ensure documentation control, including change configuration management of work instructions and records, such as manufacturing and inspection processing Instructions, inspection, and test records to preclude unauthorized changes and provide adequate verification of accuracy. All entries must be made in ink. No erasures are permitted. Drawing a single line through the error, and entering the correct information next to the error shall make a correction. Each correction shall be signed and dated by responsible authorized personnel.

6.3.6 Failure to comply with the requirements of the Purchase Order shall be cause for rejection. Titeflex reserves the right to request rework, replacement and/or credit for nonconforming product(s).

6.3.7 When the drawing or associated marking requirements require the marking of a cage code the supplier shall mark their Cage Code.

6.3.8 Whitehouse Executive Order (EO) 13224 applies to this product. The information for EO 13224 can be located at: http://www.whitehouse.gov

6.3.9 This order may be rated for National Defense use and you are required to follow all provisions of the Defense Priorities & Allocations System Regulation (15 CFR Part 700) if invoked by Titeflex Aerospace. The Supplier shall flow down this requirement on all purchased materials associated with this order.

6.3.10 Titeflex Supplied Material:
In the event that product is made from material supplied by Titeflex, a certificate or statement on a Certification of Conformance is required that identifies the part number of the material supplied by Titeflex that were used on the purchase order.

6.4 Raw Material Requirements:

6.4.1 Material Revision Level Control: Material certified to a previous specification issue and of the proper type, grade, or class called for by the Purchase Order, may be used until depletion, unless restricted by the superseding specification revision or by a Customer Specific requirements Clause. In the case where back-revision material is wanting to be used to produce Titeflex products, the supplier is required to identify the back-revision material issue (prior to use) on a VIR and submit to Titeflex purchasing who will coordinate the review and approval activity with Titeflex engineering and quality.

6.4.2 DFARS Requirements:
Titeflex suppliers are required to work to the requirements of DFARS 252.225-7008 and DFARS 252.225-7009 Preference for Domestic Specialty Metals unless otherwise excluded in the purchase order or waived via clause Q206. Unless notified in writing, the Country of Origin will be assumed to be the United States or from a Qualifying or Foreign Country as per DFARS Clause 252.225-7002, 225.003 and Far 52.225-1.

PROPRIETARY DATA NOTICE TO ALL RECEIVING THIS DOCUMENT
The information contained in this document was developed at the private expense by Smith Tubular Systems-Laconia. The contents are deemed proprietary and all patent rights are reserved. Any submission is in a spirit of confidence and acceptance is deemed to be an acknowledgment of the confidential relationship. Information contained hereon not lawfully obtained from another source shall not be released, duplicated, used or disclosed in whole or in part for any procurement or manufacturing purpose without the prior written permission of Smith Tubular Systems-Laconia.
Supplier shall also meet the requirements specified in DFARS 252.225-7007 relating to Prohibition on Acquisitions of US Munitions List Items from Communist Chinese Military Companies.

NOTE: Aluminum material is not a DFARS Specialty Metal

6.4.3 Material Traceability: Titeflex suppliers shall ensure raw material identification and traceability from material receipt to shipment of product to Titeflex. Traceability of a material heat lot or batch/lot number back to sub-tier suppliers is required.

6.4.4 Mercury Free
Titeflex suppliers shall assure that their products are free of mercury and provide a Mercury Free statement similar to the following on all Certification of Conformance documents.

“This material was processed without knowingly being exposed to Mercury or Mercury compounds”.

6.4.5 DRC (Democratic Republic of Congo) Conflict Free Materials:
Supplier shall adhere to the requirements of Dodd-Frank Wall Street Reform and Consumer Protection Act, Section 1502. Use the following link to access the Conflict-Free Smelter website: http://www.conflictfreesmelter.org/cfshome.htm

By acceptance of a Purchase Order seller warrants that materials meet the above requirements.

6.4.6 Multiple Material Types:
In cases where drawings for components permit the use of two or more materials, parts supplied in one shipment which are made from different material types shall be segregated according to material type and shall be packaged and clearly identified to distinguish the different materials.

6.4.7 Multiple Heat Lots:
In cases where one shipment of components contains more than one heat lot of material, the material shall be traceable back to the receipt of material including manufacturer(s) and their certifications.

6.4.8 If a Customer Clause requires specific Raw Material testing and the supplier does not meet the Customer requirements a 6” test sample shall be provided with the initial shipment and then annually thereafter.

6.4.9 Metallic Raw Material Certifications:
Assure Test results provided are from an ISO 17025 Approved test lab and fully meet ALL of the Specifications Chemical and Metallurgical requirements.

6.5 Special Process Requirements:

6.5.1 Nadcap (National Aerospace Defense Contractor’s Accreditation Program)
Certification is required for All Special Processes unless a Customer specific clause is invoked. Nadcap Approved Special Processors shall be certified for the specified process type (i.e. Chemical Processing, Coatings, NDT, Weld/Braze).

PROPRIETARY DATA NOTICE TO ALL RECEIVING THIS DOCUMENT
The information contained in this document was developed at the private expense by Smith Tubular Systems-Laconia. The contents are deemed proprietary and all patent rights are reserved. Any submission is in a spirit of confidence and acceptance is deemed to be an acknowledgment of the confidential relationship. Information contained hereon not lawfully obtained from another source shall not be released, duplicated, used or disclosed in whole or in part for any procurement or manufacturing purpose without the prior written permission of Smith Tubular Systems-Laconia.
6.5.2 Special Process Order of Precedence: Unless otherwise specified, the order of precedence for determining “Special Process” specifications shall be as follows:

- Purchase Order Requirements Summary Sheet
- Customer Drawing
- Top Assembly Drawing
- Sub Assembly Drawing
- Detail Drawing

6.5.3 Titeflex reserves the right to review and/or approve a Supplier’s and/or a Supplier’s Sub-tier Special Process as defined by the Drawing, Purchase Order, Industry specification/standard, and/or customer requirement.

6.5.4 The Supplier is required to use Customer Approved Special Process sources when identified within the Purchase Order and/or Drawing in the Customer Clauses Q3XX.

6.5.5 The use of an approved Supplier listing does not relieve the Supplier of any responsibility for compliance to the Purchase Order.

6.5.6 A deviation from a customer’s Approved Supplier Listing or from using a Nadcap Approved Supplier must be requested in writing and approved for use by the Titeflex Senior Quality Authority, or delegate, prior to use. The request shall identify the special process source and the supplier’s quality plan for ensuring compliance to all drawing and Purchase Order requirements. Deviations from an Approved Supplier Listing or a Nadcap listing do not relieve the Supplier of any responsibility for compliance to the Purchase Order.

6.5.7 When Titeflex Special Process Procedures are identified on the Purchase Order and/or drawing the following shall apply:

- Suppliers may use their equipment and facilities in lieu of equipment and facilities defined within a Titeflex procedure. Titeflex approval is not required.
- Suppliers requesting the use of a substitute process shall submit a copy of the process to Titeflex for review and approval. Use of a substitute process is not allowed unless authorized, in writing, by Titeflex. Process approval may require Titeflex customer approval.

6.5.8 When a chemical has been specified in a Titeflex cleaning specification by proprietary, name brand, or trademark, the Supplier may substitute an equivalent chemical provided the supplier certifies that the substitute chemical has no adverse affect on the product and receives authorization, in writing, by Titeflex.

Substitution of a dry film lubricant with an equivalent lubricant is not allowed.

6.5.9 Process control shall be maintained in accordance with Nadcap requirements or as defined in a Titeflex process specification.

6.5.10 A Certificate of Compliance (C of C) to the Special Process shall be provided with each
shipment and contain the following information, as a minimum.

- Date special process was performed
- Supplier name and address
- Process specification and revision
- Purchase Order number
- Part number and description
- Quantity in Shipment
- Customer special process approval expiration date
- Statement of conformance to all Purchase Order requirements
- Name and title of personnel authorized to state compliance

6.6 Nonconforming Material:

6.6.1 The Supplier is required to have a documented system in place that addresses the control of nonconforming material. This system shall include as a minimum, provision for prompt identification, documentation, segregation, and disposition of nonconforming material. Identification shall be in a manner to prevent unauthorized use or shipment of nonconforming material.

6.6.2 The Supplier does not have Material Review Board authority that allows acceptance of nonconforming product shipped to Titeflex, therefore, any nonconforming material that a supplier wishes to utilize for “use as is” acceptance, requires approval from Titeflex on a VIR (Vendor Information Request) Form, LSQ-2100-2, stating the reason why the nonconforming material should be approved, a description of the nonconformance, the root cause and the corrective action that the supplier will take. The supplier should not ship nonconforming material until the VIR has been approved by Titeflex.

6.6.3 Deleted paragraph and merged above.

6.6.4 The Supplier shall notify Titeflex Quality immediately when there is reason to suspect that product previously supplied may not be in accordance with the Certificate of Conformance and/or Purchase Order requirements. The Supplier shall promptly notify Titeflex Quality of any circumstances related to materials, manufacturing, processing methods, design, etc. which may make a product susceptible to premature failure. Notification shall include identification of potential lots affected, quantity of parts, and any other pertinent information.

6.6.5 Titeflex Quality must authorize shipment of nonconforming material that may require evaluation by Titeflex personnel. The material must be clearly identified and shipped separate from regular shipments. A written explanation stating the reason for evaluation must be included with the product. Shipping documentation shall be marked to the attention of the Quality personnel authorizing the shipment.

6.6.6 Titeflex reserves the right to return, at the Supplier’s expense, any or all of a lot in

PROPRIETARY DATA NOTICE TO ALL RECEIVING THIS DOCUMENT
The information contained in this document was developed at the private expense by Smith Tubular Systems-Laconia. The contents are deemed proprietary and all patent rights are reserved. Any submission is in a spirit of confidence and acceptance is deemed to be an acknowledgment of the confidential relationship. Information contained hereon not lawfully obtained from another source shall not be released, duplicated, used or disclosed in whole or in part for any procurement or manufacturing purpose without the prior written permission of Smith Tubular Systems-Laconia.
which nonconforming product has been found and does not comply with the Purchase Order, drawing, industry specification, or contractual requirements.

6.6.7 Notification of Escape - In the event the supplier material is identified as nonconforming at Titeflex, the supplier may receive a Supplier Notification of Escape document from Titeflex. The Titeflex supplier is required to perform containment (re-inspection) actions, record the results of these actions on the form, and send a copy of the form to the Titeflex contact listed within 48 hrs (2 business days). The Titeflex supplier is also required to perform 100% inspection of the nonconforming characteristics for the next three (3) production lots of the part number(s) affected. The evidence of this inspection is to be recorded on the Supplier Notification of Escape form and a copy of the form is to be sent with each of the next three (3) product shipments to Titeflex.

6.7 Corrective Action:

6.7.1 A Supplier Corrective Action Request (CAR) may be issued to the Supplier as a result of a Supplier deficiency or nonconformance. The Supplier is responsible for completing the CAR on the provided form, and returning it to the Quality department within the due date specified on the CAR. Acceptance of the response is subject to approval.

6.7.2 The Supplier is responsible for initiating action to identify and eliminate the root cause of the nonconformance and prevent its recurrence. Corrective action may be subject to verification by Titeflex personnel at the Supplier’s facility. On-site visits shall be scheduled as required.

6.7.3 When a Titeflex Corrective Action is issued to a Titeflex Supplier the requirements of QP10.2, QWI 10.2 and Form QWI 10.2-1 apply.

6.8 Certifications:

6.8.1 A certificate of compliance (C of C) shall be provided with each shipment of product and contain the following information as a minimum.

- Supplier’s Name and Address
- Purchase Order Number
- Part Number and Description
- Quantity in Shipment
- Date the C of C was issued
- Statement of conformance to all Purchase Order requirements
- Name and title of person authorized to provide the statement of compliance

6.8.2 In the event that test reports are required via the Supplemental Quality Requirements the following shall apply.

- All documents must be identified to the Purchase Order number and either the part number or description.

PROPRIETARY DATA NOTICE TO ALL RECEIVING THIS DOCUMENT

The information contained in this document was developed at the private expense by Smith Tubular Systems-Laconia. The contents are deemed proprietary and all patent rights are reserved. Any submission is in a spirit of confidence and acceptance is deemed to be an acknowledgment of the confidential relationship. Information contained hereon not lawfully obtained from another source shall not be released, duplicated, used or disclosed in whole or in part for any procurement or manufacturing purpose without the prior written permission of Smith Tubular Systems-Laconia.
Titeflex Supplier Quality Requirements

- All documents must be legible, reproducible, complete, not cut off by the photocopying process and signed or facsimile signature stamped along with the person’s name and title.

- All documents must be either copies of original mill certifications, transcriptions of original mill certifications on the Supplier’s letterhead, or reports on the Supplier’s letterhead and must be written in the English language.

6.8.3 First Article Inspection Requirements: The supplier shall provide a completed FAIR by the manufacturer with the first shipment of product. The Supplier shall provide a Ballooned Drawing that corresponds to the characteristics on FAI Form 3. Unless otherwise specified by the customer or purchase order, the First Article Inspection (FAI) shall be performed in accordance with the most current revision of SAE AS9102 and shall be documented on Forms AS9102-1 through AS9102-3.

- A new FAIR is required anytime a drawing revision change occurs. (Revision changes would be flowed down via a PO Amendment)

- A 2 year break in production by a supplier requires a new FAIR submittal.

- A FAIR is not required for standard catalog hardware (as defined by AS9102).

- Products such as adhesives tape or any off the shelf items that are not referenced with a customer or a Titeflex drawing do not require a FAIR.

6.9 Sampling Inspection:

6.9.1 The frequency of inspection shall be in accordance with customer requirements as stated in Appendix A. When no specific frequency of inspection is identified on the Purchase Order, the Supplier shall use sampling plans that contain Acceptable Quality Levels (AQL) per ANSI/ASQ Z1.4, 100% for Critical Characteristics, 1.0 AQL Level II for Majors, and 2.5 AQL Level II for Minors. Sampling plans must conform to a zero acceptance number (C = 0) and shall be statistically valid and appropriate for use. Critical Characteristics and Non Destructive Testing (NDT) must be inspected 100%, regardless of the sampling plan used.

6.9.2 Sampling inspection shall not be used in the re-inspection of nonconforming articles. Characteristics known to be nonconforming shall be inspected 100%. The remaining characteristics shall be inspected per the appropriate inspection plan.

6.9.3 When a Customer Clause indicates inspection sampling requirements the Customer Clause overrides this section.

6.10 Source Inspection and Self Release Inspection:

6.10.1 Titeflex reserves the right to request that on-site source inspection be performed by a Titeflex Quality representative and/or Customer or Government representative. The Supplier shall be contacted by Quality to coordinate all source inspection activity.

6.10.2 A self-release Supplier shall process product in accordance with the self-release requirements. The self-release requirements override any Purchase Order requirement to perform source inspection unless specific agreed upon arrangements.
Titeflex Supplier Quality Requirements

have been made with the Supplier to perform source inspection.

6.11 Titeflex and Customer Supplied Product and Tooling:

6.11.1 The Supplier shall establish and maintain documented procedures for the control, verification, storage, and maintenance of supplied product and tooling provided by Titeflex or its customer for incorporation into the supplies and in controlling tools furnished by Titeflex and/or by a Titeflex customer. This procedure shall identify controls for ensuring adequate storage and handling and for identification, reporting protection from improper use and disposition.

6.11.2 The Supplier is required to submit an inventory report when requested. The Supplier shall complete the report within 14 days, unless otherwise indicated by Quality, and shall return it to the Quality department. The report shall contain, at a minimum, the Supplier’s name, tool type or name and quantity, tool identification number as applicable and tool condition. In the event that any of the tooling becomes damaged or is unsuitable for use, the Supplier must contact Titeflex for resolution.

6.11.3 Titeflex and/or its customer’s reserve the right to perform on-site inspection and verification of tooling located at the Supplier’s facility.

6.12 Record Retention:

6.12.1 Unless otherwise specified in the Purchase Order or Appendix A - Supplemental Quality Requirements, documentation that substantiates certification of product or services shall be maintained on file, safe from damage, deterioration, etc. for a minimum of ten (10) years after completion of the Purchase Order. This documentation may include, but is not limited to material certifications, test coupons, manufacturing and inspection records, radiographs and test reports. These records may be subject to review and audit. Supplier must notify Titeflex Quality within sixty days prior to disposal of any documentation referenced above.

6.13 Workmanship:

6.13.1 Workmanship shall be in accordance to drawing, customer specification, industry specification or standard, or any other specifications referenced.

6.14 FOD (Foreign Object Detection) Program:

6.14.1 Manufacturing processes shall be developed and implemented for all products in such a manner as to prevent foreign object contamination.

6.14.2 Supplier FOD prevention practices shall include:

- Training
- Work area cleanliness
- Restrictions of unessential items in the production work areas and on inspection work surfaces (i.e. food, houseplants, unprotected drinks etc.).
6.15 Handling & Packaging:

6.15.1 The Supplier shall establish methods and facilities for identifying, handling, and storing product to ensure against corrosion, damage, deterioration, or substitution.

6.15.2 All products are to be packaged as follows unless otherwise specified by drawing or Purchase Order:

- Identify with Part Number, Drawing Revision Level and Purchase Order number.
- Package each shipment of parts to prevent co-mingling of part numbers.
- Package parts in a manner that prevents metal-to-metal contact.
- Package parts in a manner that prevents metal-to-metal contact using protective caps, plugs, or bags/bubble wrap
  - Exposed Sealing Surfaces
  - External Threads/Barbs
  - Heavy/Expensive product with hard edges
  - Any product that could cause damage to another if packaged in bulk
  - Unfinished end of product (such as tube ends on Sub-Assemblies)
- All packaging should be comparable to the part size
- Containers shall be Shatter Proof
- All product supplied to Titeflex shall be free from oil, dirt, metal chips, dings, nicks or other damage related defects.
- All threads, sealing surfaces and unfinished ends of product (such as ends of tubes) shall be protected from damage via protective caps or plugs.
- In the event you are unsure please contact the Titeflex SQE for clarification.

6.16 Fraudulent/Counterfeit Parts Requirements per AS6174:

6.16.1 Seller is hereby notified that the delivery of Counterfeit Goods is of special concern. Seller shall not furnish to Buyer any goods under this contract that are “Counterfeit Goods” defined as goods or separately-identifiable items or components of goods that are an unauthorized copy or substitute of an Original Equipment Manufacturer or Original Component Manufacturer (collectively, “OEM”) item.

6.16.2 Seller shall only purchase goods from Original Component Manufacturer (OCM), or Original Equipment Manufacturer (OEM), or through the OCM/OEM authorized distributor. The Seller shall provide appropriate documentation that authenticates traceability of goods to the OCM/OEM. The certificate of conformance that provide for one or more of the following: (i.e.) the OEM’s original Certificate of Conformance for the items; (ii) sufficient records providing unbroken supply chain traceability to OEM; or (iii) Test and Inspection records demonstrating the item’s authenticity.
6.17 ITAR/EAR:

6.17.1 Technical Data Legend

- Seller shall include the following legend in solicitations and purchase orders/contracts or any other communication means that contains export-controlled unclassified technical data.

“WARNING: The information contained in or attached to this e-mail may be subject to either 22 C.F.R. Parts 120-130, or 15 C.F.R. Parts 730-774. Export, re-export or retransfer contrary to U.S. law is prohibited. Violators of these export laws may be subject to severe criminal penalties.”

Calibration System Requirements:

6.17.2 For Product supplied on Titeflex Purchase Orders, supplier shall maintain a National Institute of Standards and Technology (NIST), International Organization of Standardizations (ISO) or equivalent agency traceable calibration system capable of insuring the accuracy of all measuring equipment utilized in the inspection and acceptance of procured products.

6.18 REACH Compliance:

6.18.1 Supplier represents and warrants that the goods and any substances contained therein are not prohibited by, and are supplied in compliance with, laws or regulations of any country or jurisdiction in the world, including but not limited to the United States, the European Union (“EU”), and nations adopting legislation similar to that if the EU, and that nothing prevents the sale or transport of the Goods or substances in Goods in any country or jurisdiction in the world and that all such Goods and substances are appropriately labeled, if labeling is required, and have been pre-registered and/or registered and/or authorized under the EU Registration, Evaluation, Authorization and Restriction of Chemicals regulation (“REACH”), if pre-registration, registration and/or authorization is required.

- Passivation of Stainless Steels, the usage of Sodium Dichromate will be banned. The sunset date for this substance is 21st of September 2017.
Appendix A

Supplemental Supplier Quality Requirements

The following Supplemental Requirements are in addition to the above General Requirements referenced, when identified on the Purchase Order.

Q100 Eye Examination Requirements: Supplier’s visual inspection personnel shall meet the following requirements:

- Supplier shall ensure that each individual performing visual inspection has an eye examination performed by a medically qualified/trained individual annually and that, if necessary, or if correction is prescribed, each individual uses the required corrective lenses when performing inspections. Supplier shall retain the records of the eye examination results.
- Individual is to have the following vision in at least one eye, either corrected or uncorrected:
  - Near vision: Snellen 14/18, (20/25), Jaeger 2 not less than 12 inches.
  - Color vision: Must be able to distinguish and differentiate between the colors used in the method for which certification is required, process being performed or inspection activity (Testing for color vision is required one time only).
  - Welders shall meet the Visual Requirements of AWS D17.1 or equivalent
  - Nondestructive Testing (NDT): Aerospace Industries Association National Aerospace Standard (AIA/NAS) 410 or equivalent
  - For individuals who do not meet the specified vision requirements, Supplier shall review each individual’s job assignment to determine if the assignment can be effectively performed and ensure these individuals do not perform inspection tasks where these vision requirements are necessary for product conformance.

Q102 Distributor/Stocklist Responsibility: Supplier shall maintain a Quality Management System that is certified to AS9120/EN9120, AS/EN/JIS9100 or ISO 9001. If not certified to one of these standards, the supplier shall be approved by the Titeflex Senior Quality Authority (or delegate). This product is either a catalog item and/or can be procured from a distributor.

1. The distributor shall include a packing slip with each shipment. The packing slip shall include as a minimum the following data:
   - Distributor’s Name
   - Purchase Order number
   - Manufacturer’s name and location
   - Manufacture’s part number and/or catalog number
   - Quantity of each item shipped.
Titeflex Supplier Quality Requirements

- For military parts, a copy of documents required by the governing military specification shall be forwarded with the shipment
- Copy of the Manufacturer’s Certificate of Conformance
- On the first shipment, the supplier shall include with the hardware a catalog specification sheet, drawing or other sketch to provide sufficient data to verify receipt of correct material.
- First Article requirements per section 6.8.3 do not apply to orders invoking this Q-Clause.

Q103 Customer Approved Source Required: The specific end use customer is listed either on the Engineering Drawing or on Purchase Order. If it is not clear, as to whom the end use customer is the supplier shall contact the buyer for assistance.

Q104 ESA Titeflex - Laconia: Titeflex Engineering Source Approval is required. When the Engineering Drawing or other documents impose Engineering Source Control (ESA) or equivalent, the Supplier shall request written instructions from Purchasing. The Supplier noted in the Body of the Purchase Order is controlled by Titeflex Aerospace.

Q105 Special Process Test Reports Required: When Non-destructive testing or Special Processes, such as Heat Treatment, Cleaning, Passivation, Anodize, Radiographic Inspection, Liquid Penetrate Testing etc. are required by the drawing and/or Purchase Order. A copy of the Special Process test report is required for each part number inspected along with the results from each test. The Special Process test report shall include the specification or procedure used and its applicable revision letter. The person performing the test or an authorized representative shall sign the test report.

Q106 Shelf Life Requirements: The applicable shelf life information shall be indicated on the item identifying label and Certificate of Conformance. If the shelf life is from date of manufacture either the manufactured date or expiration date shall be indicated on the items identifying label. In addition, the batch number shall also be placed on the identifying label. All items provided under this requirement must have at least 85% of its usable shelf life left at the time of receipt.

Q107 Frozen Design / Processes: Proposed changes in design, fabrication methods, raw material procurement sources and/or the use of new processes of which were previously approved by Titeflex, either by continuous procurement from the Supplier or approved by formal letter, must be documented and approved in writing by Titeflex before implementation.

Q108 X-Ray Submittal: X-Rays required with shipment of products to Titeflex.

Q109 Source Control / Proprietary Product: Procurement shall be from the source specified by the Purchase Order, Engineering Drawing or supplemental procurement documentation. It is recognized that some information on source control drawings may be proprietary. It is the responsibility of the Supplier to conform to the end use customer requirements and maintain objective evidence of conformity on file.

- Suppliers shall include on the Certificate of Conformance a statement that all materials are compliant to DFARS 252.225-7009 as applicable.
Titeflex Supplier Quality Requirements

- The Certificate of Conformance statement shall indicate that all additional documentation is on file at the supplier's facility and available upon request.
  
  **Exception:** When this Quality Clause is invoked Q105 does not apply to the P/O.

**Q110 Inspection Method Sheet or Instruction Record:** The supplier shall furnish with the initial product shipment, a copy of the Inspection or Instructions used for product acceptance. The Inspection Instructions shall include the following as a minimum:

- Part Number and Revision
- Inspection methods, gages and inspection equipment, and visual standards
- Inspection sample size and sampling level as applicable

**Q111 Outside Process (OSP) Providers:** Titeflex OSP suppliers are required to perform the following activities associated with the processing of Titeflex materials:

- Review the Titeflex Purchase Order and Router/Traveler information to requirements and ensure full understanding of both prior to processing material. Supplier is required to have current copies of Titeflex and end-customer specifications and drawings identified in the Titeflex PO and Router. If questions or issues arise, notify Titeflex purchasing immediately for resolution.
- If this process is for the machining of Titeflex supplied materials and there are additional Customer specific requirements the associated Customer Clause will be included in the attachments.
- Perform visual inspection of all parts as received from Titeflex prior to processing to ensure parts are free of damage and defects. If questions or issues arise, notify Titeflex purchasing immediately for resolution.
- Verify that the part numbers and quantities of parts received are correct as identified on the Titeflex PO and Router/traveler. If questions or issues arise, notify Titeflex purchasing immediately for resolution.
- Perform inspection of product after processing to assure that parts meet the Titeflex PO and Router requirements and are free of damage and defects.
- Provide with shipment of parts a Certification of Compliance document with specific reference to Titeflex and end-customer specifications and specification revision levels.

**Q112 PRI E-Audit QML (Qualified Manufacturer List) or QPL (Qualified Part List) Approved Source is Required:**

1. This part shall be manufactured by an Accredited Manufacturer listed in the Nadcap Qualified Manufacturer List (QML) for this product type. The Qualification requirements are noted on the drawing or procurement specification and the QML Section for Fluid Distribution Systems, which will be noted in the body of the Purchase Order Requirements Summary Sheet. And or,
2. This Part shall be manufactured by an Accredited Manufacturer listed in the Qualified Part List (QPL) based on Fluid Distribution Systems for the Part Number, Size and Material Alloy Type. The E-Audit website is: www.eauditnet.com

Distributors/Suppliers will need to set-up their own accounts to verify Manufacturer Approval.

3. Distributor or Manufacturer shall ensure that all Special Processes are performed by Nadcap Approved Sources.

4. Provided copy of the Original Manufacturer’s CofC

5. Certificate of Conformance shall include the following:
   - Supplier Name
   - Titeflex PO#
   - Part Number
   - Part Revision
   - Supplier shall ensure that all Standard Hardware delivered to Titeflex conforms to the latest specification or configuration requirements.

Exception: When this Quality Clause is invoked Q105 does not apply to the P/O.

NOTE: The General Requirements portion of this document does not apply to this product. Only this QC Clause and the additional clauses invoked apply.

Q113 3rd Party Standards not QML/QPL Controlled:

1. Distributor or Manufacturer shall ensure that Special Processes are performed by Nadcap Approved Sources as required by AC7112

2. A certificate of compliance (C of C) shall be provided with each shipment of product and contain the following information as a minimum.
   - Supplier Name
   - Titeflex PO#
   - Part Number
   - Part Revision
   - Supplier shall ensure that all Standard Hardware delivered to Titeflex conforms to the latest specification or configuration requirements.
   - If supplier is a Distributor for the Manufacturer then a copy of the Manufacturer’s C of C shall be provided with shipments.

NOTE: The General Requirements portion of this document does not apply to this product. Only this QC Clause and the additional clauses invoked apply.
Q114 Parts Manufacturing Approval (PMA) Required

1. PMA is required on this product in accordance with FAA 14 CFR Part 21 Subpart K
2. NOTE: MARK FAA-PMA on all product and paperwork


1. Metallic Material Requirements
   - Material certified to a previous specification issue and of the proper type, grade, or class called for by the Purchase Order, may be used until depletion, unless restricted by the superseding specification revision or by a Customer Specific requirements Clause.
   - A copy of the raw material test report is required along with a copy of the Original Mill/Melt source certification.
   - A Certificate of Conformance must accompany each delivery, as issued from the Original manufacturing source with Chemical Analysis and Mechanical Test results and be signed by a senior Quality person (including job title) and date for each heat or batch lot that is shipped. The certificate must contain the material requirements of the specification/drawing and/or Purchase Order.
   - In the event that a supplier wishes to utilize material certified to a back revision, when a Customer specific clause notes that back revisions need Customer Approval prior to shipment the supplier shall submit a VIR Form LSQ-2100-2 to Titeflex Purchasing for authorization from Titeflex Engineering and Quality to use the material.
   - Batch/Lots shipped shall only contain one type of material alloy. Material alloy lots shall be separated to prevent the use of multiple batch/lots from being combined.
   - Material shall not be Rolled Plate or Forged Bar sourced from Western Titanium or Mach 2 Metals at any sub-tier supplier level.

2. Test Report – Non-Metallic type Products (Teflon, silicone, etc.)
   - A Test Report in accordance with the material specification is required with each shipment.

Certifications/Test Reports must include the following:
   - Lot/batch number
   - Cure Date (example: 4Q08 format only) if applicable
   - Shelf-life (as specified by Specification)
   - Expiration date (example: 4Q08 format only) if applicable
   - Test reports must show actual values as required by the specification including applicable revision level.
   - Revisions must to be the latest level at the time that the material was completed unless current revision disallows a former revisions use.
Titeflex Supplier Quality Requirements

- All lots/batches must be segregated and identified to maintain batch and cure date traceability.
- Contain signature and title of an authorized representative of the organization performing the testing.
  Material will be procured from an approved supplier when required by design authority.
  All material and process certifications must be completely legible and reproducible.

Q201 Identification and Traceability (I&T): I&T controls are required for each raw material item, part, or lot of parts manufactured. The part or parts shall be tagged or identified to the heat or batch lot from which it was manufactured to permit traceability to parent material records. Parts designated “L1” are required to meet Level I Sub Safe criteria for use in U.S. Navy Shipboard applications.
  - Material used must be to the latest revision of the material specification at the time the Purchase Order was placed.
  - Test reports must be dated and signed copies of the original mill chemical / physical certification for the heat or batch lot. Should subsequent processing of the heat or batch lot change the chemical or physical properties of the raw material such as in forming or forging, the material shall then be retested to verify chemical/physical properties.
  - I&T lot number when required by a Titeflex specification such as PS 548, shall be provided upon completion of material testing by Titeflex. Material as required by the Titeflex Specification shall be forwarded as follows:

ATTN: Titeflex Receiving Inspection, 144 Lexington Dr., Laconia NH 03246

Q203 United States Manufactured: Parts, Components and Materials furnished under this order are required to be (US) United States Manufactured products only, unless otherwise approved in writing.

Q204 Alpha Case Free Titanium: Titanium must be free of alpha case. Testing shall be per the latest revisions of P3TF19 and S-393 by a General Electric approved source and supported by a certificate, which references the Purchase Order number and part number.

Q206 Titeflex Waiver for DFARS 252.225-7008 and DFARS 252.225-7009 Specialty Metals: If this clause is specified Titeflex waives the requirement for DFARS 252.225-7008 and DFARS 252.225-7009 per Section 6.4.2.

Q207 For use in Manned Space Flight: Materials, Manufacturing, and Workmanship of the highest quality are essential to Astronaut safety. If you are able to supply the desired item at a higher quality than that of items specified or proposed, you are required to bring this fact to the immediate attention of the purchaser.

Q208 Government Source Inspection for NASA Required: All work on this order is subject to inspection or test by the Government at any time and place. The Government Quality representative who has been delegated NASA Quality Assurance functions on this procurement shall be notified immediately upon receipt of this order. The government representative shall also be notified forty-eight (48) hours in advance of the time articles or materials are ready for inspection or test.
Titeflex Supplier Quality Requirements

Q209 Titeflex Supplied Material for Set-Up: Material provided for machine setup shall be scrapped if it is rendered non-conforming at the supplier's facility. The supplier shall render any set-up material unusable by mutilation, crushing, scoring, or cutting into smaller pieces.

- The supplier shall maintain documents on file for any setup pieces scrapped in accordance with this quality clause and shall provide a statement on the Certificate of Conformance indicating "Setup pieces provided by Titeflex have been scrapped".
- Conforming set-up pieces may be shipped to Titeflex as long as the supplier has notified the Titeflex Buyer and the PO has been revised to reflect the additional quantity.

Supplier may be debited for nonconforming material in excess to that which was provided for machine setup. Supplier shall notify the Titeflex Buyer to reduce the PO quantity accordingly.

Q210 Government Clause FAR 52.246-2 Applies:

- Supplier shall work to the requirements defined in Government FAR Clause 52.246-2
- When a Titeflex supplier receives a PO noting the Q210 Clause for DCMA Delegation they shall go to the following site and register. http://www.dcma.mil/customers.
  - Once registered a DCMA Representative will contact them to see what Special Processes they are performing on the part and whether or not the process is being performed in-house or who it is being outsourced to. DCMA requires overview of Special Processes that they consider Medium or High Risk on Critical Safety Items or Critical Application Items and components thereof. The supplier shall continue their normal processing until the point that the DCMA Representative makes contact with them. When the DCMA Rep. requires a Hold point for Process Review at the supplier/sub-tier supplier once contact is made they shall only be required to HOLD product for no more than 7 days from the time that the parts reach the HOLD point process.

- The Titeflex DCMA Representative will make initial contact with the local DCMA Representative in the area where the Titeflex Sub-Tier supplier resides. If the supplier is not already registered then they may request coordination with supplier through the Titeflex Buyer.
- If the Titeflex supplier offloads a Special Process that requires DCMA Surveillance, the suppliers local DCMA Representative will perform delegation again to the local DCMA Representative that is in the area that the suppliers Special Processor is located.
- If a DCMA Representative invokes Government Source Inspection (GSI) for follow on shipments against a Purchase Order the supplier is required to have a DCMA Representative review all shipments against the existing PO until the order quantity is met.

Q211 First Article Inspection Required: On the Initial Ship to Titeflex Aerospace, provide a First Article Inspection Report with the shipment.

Q212 Government End Use Item: This clause is to notify the supplier that the Government is an end user.
Q213 Weld per PS400 (Supplier/Supplier Sub-Tier) Requirements:

1. Radiographic Technique Approval Required by Titeflex NDT Level III when Titeflex Specification PS400 is invoked in a Quality Plan / PO or on a Drawing when a supplier processes to this Titeflex Specification.
   - Revisions to any existing techniques must be re-approved by Titeflex NDT Level III for Approval.
   - Films must be maintained at Supplier facility per ASTM-E-1254.
   - Supplier must submit films for NDT Level III Approval when Technique is submitted
   
   NOTE: The X-Ray Films will be returned to the Supplier for retention along with the Titeflex Technique Approval.

2. PS400 (Supplier/Supplier Sub-Tier) Fluorescent Penetrant Inspection Technique Approval Required by Titeflex NDT Level III when Titeflex Specification PS400 is invoked in a Quality Plan/PO or on a Drawing when a supplier processes to this Titeflex Specification.
   - Revisions to any existing techniques must be re-approved by Titeflex NDT Level III for Approval.

Q214 Government Clause DFARS 252.204-7012 (NIST) applies:

- Supplier shall work to the requirements defined in Government DFARS clause 252.204-7012 “Safeguarding Covered Defense Information and Cyber Reporting”.
- When a Titeflex supplier receives a PO noting the Q214 Clause, supplier must notify Titeflex of any non-compliance to the requirements in National Institute of Standards and Technology (NIST) Special Publication (SP) 800-171 “Protecting Controlled Unclassified Information (CUI) in Nonfederal Information Systems”.
- Supplier shall implement NIST SP 800-171, as soon as practical, but not later than December 31, 2017.
- When Supplier discovers a cyber incident that affects CUI, Supplier must rapidly report such incident to DoD at http://dibnet.dod.mil and additionally must immediately notify Titeflex of such incident.

Q300 General Electric Company “End Use”: This item is for General Electric (GE) End Use. The following requirements apply:

- GE S-1000 & S-1002 Requirements apply.
- 100% Inspection of all characteristics on every piece manufactured, except with approved justification per acceptance plans in Appendix A. (See GE S-1002 Section 4.4 for additional information)
When a GE Specification is referenced in parentheses on a Titeflex Drawing the GE Specification is the defining requirement.

- Metallic Raw Material Testing shall be by an ISO 17025 Certified Test Lab.

- Procurement and Control of Source Control Hardware for a Designated Distributor: Supplier shall work to the requirements noted in S-411 along with the requirements noted in S-1000 when S-411 is attached in a Purchase Order.

### GE (General Electric) Special Processor Requirements

<table>
<thead>
<tr>
<th>If</th>
<th>Then</th>
</tr>
</thead>
<tbody>
<tr>
<td>GE Designed Part with GE Specification</td>
<td>- Special Processors shall be Nadcap Approved for the type of Process and the GE Checklist was used in the Nadcap Approval process.</td>
</tr>
<tr>
<td></td>
<td>- Weld/Braze Processors shall be Nadcap Approved for the type of Process PLUS the Nadcap Approval shall include the GE Checklist as part of the Nadcap Approval Process Ref. AC7110/12S - Code U10 for Welder/Welding Operator Qualification).</td>
</tr>
<tr>
<td>GE Designed Part with 3rd Party Standard</td>
<td>o Nadcap Approved Source Required for the Process Type</td>
</tr>
</tbody>
</table>

### Aerospace / Industry Standard and Catalog Parts

<table>
<thead>
<tr>
<th>If</th>
<th>Then</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Special Process is required on the product</td>
<td>Special Processor shall maintain Nadcap Certification for the process type.</td>
</tr>
</tbody>
</table>

#### Q301 GE End Use – VSE Required:
Vendor Substantiation Engineering (VSE) or Source Substantiation (SSE) is required per General Electric Specifications P1TF17 and S-1001. The Supplier shall submit a completed GT7350 with the parts. Prior approval is required for a change to a significant process or significant process sequence. A sequential listing of all processes and a description thereof (i.e. a copy of the shop router or traveler), used in the performance of this Purchase Order by the Supplier and/or Supplier’s sub-tier is required to be submitted with the first shipment. In addition, the Supplier shall conform to Supplemental Requirement Q107.

- 100% Inspection of all characteristics on every piece manufactured, except with approved justification per acceptance plans in Appendix A. (See GE S-1002 Section 4.4 for additional information).
Titeflex Supplier Quality Requirements

- Suppliers performing a Weld / Braze process shall be GE Yellow Pages or be Nadcap Approved for the process PLUS the Nadcap Approval shall include the GE Checklist as part of the Nadcap Approval (Ref. AC7110/12S - Code U10 for Welder/Welding Operator Qualification).

- NOTE: When a GE Specification is referenced in parentheses on a Titeflex Drawing the GE Spec is the defining requirement.

- GE Raw Material Control: The Raw Material manufacturing source shall utilize a GE S-400 approved laboratory and supply evidence of compliance on the certification. If the raw material is not from a GEAE approved source, it must be fully tested to all requirements of the drawing and or specification and supported by a test report from a GEAE approved certified testing laboratory. Reports must be sent with each shipment.

- Any Process directly controlled by a GT7350 will be noted directly in the body of the Suppliers Purchase Order.

<table>
<thead>
<tr>
<th>GE (General Electric) Special Processor Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>If</strong></td>
</tr>
<tr>
<td>GE Designed Part with GE Specification</td>
</tr>
<tr>
<td>GE Designed Part with 3rd Party Standard</td>
</tr>
<tr>
<td>Metallic Raw Material Testing</td>
</tr>
</tbody>
</table>

**Q302 General Electric X-Ray:** It shall be the responsibility of the inspection source to develop and submit a radiographic Quality plan per the requirements of GE P3TF5 and GE Form no. GT4024. The Quality plan must be approved by General Electric and must be made available for review at the inspection source facility. The radiographic Quality plan is only applicable at the originating facility on the specified equipment. Any change in equipment or technique parameters shall necessitate a re-submittal. The Supplier shall ensure that a GE approved radiographic Quality plan is available prior to shipment of product to Titeflex. The Quality plan along with X-Rays supporting the plan shall be forwarded to the attention of: Titeflex Aerospace, 93 Lexington Drive, Laconia New Hampshire, 03246-2935. A review for compliance by the Titeflex Level III shall precede the submittal to GE. Titeflex reserves the right to reject the technique plan and request re-submittal. Once GE has approved the plan, Titeflex shall return the x-rays along with a copy of the approved plan to the inspection source.

**Q303 Rolls Royce Corporation “End Use”**: Subcontractors or sub-tier Suppliers, used in the performance of this Purchase Order, are required to follow Rolls Royce SABRe Manual Requirements. A general breakout is noted in the Tables and Paragraphs below.

**PROPRIETARY DATA NOTICE TO ALL RECEIVING THIS DOCUMENT**

The information contained in this document was developed at the private expense by Smith Tubular Systems-Laconia. The contents are deemed proprietary and all patent rights are reserved. Any submission is in a spirit of confidence and acceptance is deemed to be an acknowledgment of the confidential relationship. Information contained hereon not lawfully obtained from another source shall not be released, duplicated, used or disclosed in whole or in part for any procurement or manufacturing purpose without the prior written permission of Smith Tubular Systems-Laconia.
NOTE: For Titeflex Designed product the supplier shall be AS9100 Certified otherwise the only requirement is noted in the Table below.

### Rolls Royce (Allison / LHTEC) Designed product shall only be manufactured by a Rolls Royce Approved Supplier

<table>
<thead>
<tr>
<th>If</th>
<th>Then</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outsourcing of machining operations</td>
<td>Supplier shall meet Rolls Royce criteria for Approval, which is AS9100 or if business is less than 50% Aerospace Products ISO9001.</td>
</tr>
</tbody>
</table>

NOTE: (Note: Contact the Titeflex Buyer if assistance is needed with RR Special Process Approved Sources)

### Aerospace/Industry Standard and Catalog Parts

<table>
<thead>
<tr>
<th>If</th>
<th>Then</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Part or Catalog Part</td>
<td>Rolls Royce Approval is NOT required but supplier shall be AS/EN/ 9100 / 9120 Certified or JIS equivalent as applicable. Alternate means of certification are ISO 9001 if a business is less than 50% Aerospace Sales.</td>
</tr>
<tr>
<td>A Special Process is required on the product</td>
<td>Special Processor shall maintain Nadcap Certification for the Process Type</td>
</tr>
<tr>
<td>Raw Material to Aerospace/Industry Standard Specifications</td>
<td>Melt Source/Re-Processor is required to be ISO 9001 Certified,</td>
</tr>
</tbody>
</table>

### Raw Material Requirements

<table>
<thead>
<tr>
<th>If</th>
<th>Then</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerospace/Industry Standard</td>
<td>Melt Source is required to be ISO 9001 Certified plus be a Rolls</td>
</tr>
</tbody>
</table>

**PROPRIETARY DATA NOTICE TO ALL RECEIVING THIS DOCUMENT**

The information contained in this document was developed at the private expense by Smith Tubular Systems-Laconia. The contents are deemed proprietary and all patent rights are reserved. Any submission is in a spirit of confidence and acceptance is deemed to be an acknowledgment of the confidential relationship. Information contained hereon not lawfully obtained from another source shall not be released, duplicated, used or disclosed in whole or in part for any procurement or manufacturing purpose without the prior written permission of Smith Tubular Systems-Laconia.
Titeflex Supplier Quality Requirements

<table>
<thead>
<tr>
<th>Specification</th>
<th>Royce Approved Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerospace/Industry Standard Specification</td>
<td>Re-Processor is required to be ISO 9001 Certified plus Test to Specification by a Certified Test House that is Nadcap Approved</td>
</tr>
</tbody>
</table>

1. 100% Inspection is required for all characteristics unless the following is achieved:
   - The supplier has performed a Cpk study that yields a Cpk value of 2.0 or greater and has achieved this by satisfactory product verification / inspection records from 3 or more successive batches / lots containing a combined total of at least 25 parts.

2. Marking Requirements:
   - When a Rolls Royce (Allison / LHTEC) drawing calls out AS478 marking and EDT 500 or EDT 506 are noted on the drawing EDI 460 supersedes AS478. If EDT 500 or EDT 506 appears, use Table 3 of each document to find the appropriate marking method in EDI 460. Appendix C of EDI 460 provides instructions for converting marking content from AS478 and Appendix B Section 1.3 provides guidance for marking in limited space situations.
   - Where EDI 460 is noted on a Rolls Royce drawing mark as instructed by the drawing and EDI 460 requirements.

3. **FAIR Package Submittal & Approval requirements prior to first time shipment**
   The following shall be submitted as a complete package to Titeflex for Rolls Royce Approval prior to the supplier first shipping to Titeflex.
   **NOTE:** Suppliers are required to submit to Titeflex any source changes for Rolls Royce pre-approval before changes are made to Material Supplier or Special Process Suppliers after Rolls Royce FAIR Approval.
   1. A FAIR Content / Check Sheet shall be completed
   2. A FAIR Approval Form must be completed
   3. The following shall also form a part of the FAIR package:
      1. Ballooned Drawing
      2. Methods of manufacture
      3. Copy of Completed Router/Traveler Sheets
      4. NDT Data Cards and Instructions must be signed by a Rolls Royce Authorized Level III or by Rolls Royce
      5. Part Marking Verification sheet (Photo of Actual part marked)
      6. Quality Standards and Test Procedures
      7. Casting / Forging Rolls Royce Approved Technique (**FAIR Approval Form signed off by Rolls Royce**)
8. Special Process Data Cards also referred to as Part Specific Work Instructions shall include the following:
   o Process Specification(s),
   o Sequential & Technical parameters of the process
   o Identify the issue status and date
   o Have a clear individual identity (e.g. part number or unique number traceable to the part number)
   o Reference inspection or special test piece / monitoring requirements

9. Inspection Method Sheet (IMS)

3.1 FAIR Package Requirements for Aerospace/Industry Standards and Titeflex Designed Parts. Supplier shall work to the General Requirements

Purchasing / Subcontracting
   o Stock Lists and Distributors to be ISO 9001 or TS16949 Approved
   o Raw Material of RR Material Specs – AS/EN/JISQ 9100 Approved and traceability to the raw material manufacturer is required.
   o Raw Material of Non-RR Material Specs – ISO 9001 or TS16949 Approved and Test to Specification
   o Supplier shall to maintain records per Category B of Sabre2 Sect. A1.4 (6 Years Minimum)

Q303-1 Rolls Royce “End Use” Titeflex Designed Products: Suppliers working on Products that have this clause specified on the Purchase Order shall be ISO9001 if less than 50% of product they manufacture is Aerospace if over 50% is Aerospace products then AS9100 Certification is required.

<table>
<thead>
<tr>
<th>Titeflex Designed Parts</th>
</tr>
</thead>
<tbody>
<tr>
<td>If</td>
</tr>
<tr>
<td>Titeflex Design Part</td>
</tr>
<tr>
<td>A Special Process is required on the product</td>
</tr>
</tbody>
</table>

Q304 Rolls Royce Corporation RESA: This is for a RR RESA part per LHV 9502 or EDS 1306. Supplier shall request written instructions from Titeflex Purchasing.

Q305 Pratt & Whitney East Hartford “End Use”: The following applies with evidence of compliance to these requirements provided with shipment of parts:

PROPRIETARY DATA NOTICE TO ALL RECEIVING THIS DOCUMENT
The information contained in this document was developed at the private expense by Smith Tubular Systems-Laconia. The contents are deemed proprietary and all patent rights are reserved. Any submission is in a spirit of confidence and acceptance is deemed to be an acknowledgment of the confidential relationship. Information contained hereon not lawfully obtained from another source shall not be released, duplicated, used or disclosed in whole or in part for any procurement or manufacturing purpose without the prior written permission of Smith Tubular Systems-Laconia.
### Aerospace/Industry Standard and Catalog Parts

<table>
<thead>
<tr>
<th>If</th>
<th>Then</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Special Process is required on the product</td>
<td>Special Processor shall maintain Nadcap Certification for that process type.</td>
</tr>
</tbody>
</table>

- Only the requirements in the Table above apply to Aerospace/Industry Standard and Catalog Parts.
- Otherwise the Clause is used internally only as an in-house flag for Titeflex Processing on receipt.
- Titeflex waives the requirement on Standard COTS items for providing the Special process Certs.

### PWA Designed product Special Processor Requirements

<table>
<thead>
<tr>
<th>If</th>
<th>Then</th>
</tr>
</thead>
<tbody>
<tr>
<td>A NDT Process is required</td>
<td>Special Processor shall be listed in P&amp;W Appendix A Section I of MCL NDT Manual (In Titeflex system as MCL-NDT.APP-A-SECT.1)</td>
</tr>
<tr>
<td>A Special Process other than NDT is required on the product</td>
<td>Special Processor shall be listed in P&amp;W MCL Manual (SQL) Source Qualification List. (In Titeflex system as MCL-SQL LIST)</td>
</tr>
</tbody>
</table>

- All wrought raw material in the form of sheet, bar, tubing, wire, and plate shall only be procured from PWA LCS Approved Sources. If a supplier has inventory that will have PWA End Use for wrought raw material from Non-LCS Approved Suppliers shall request use from Titeflex via PWA Authorization.

**NOTE:** The above bullet does not apply to Aerospace/Industry Standard and Catalog Parts

- Raw Material: Supplier shall use the latest revision on Raw Material unless a VIR has authorized use of a previous revision.
- Inspection Sample Plan: P&W Approved sample plan per ASQR 20.1 applies.
- Supplier must conform to the requirements of ASQR-01 and UTCQR-09.1.
- Marking Requirement: *Do not Mark completed product unless specifically noted on Purchase Order.* (Example NOTE: MARK PER PWA310 or PWASP310 CL-xx).
  
  **NOTE:** Only castings are required to be marked.
- If Supplier is a Distributor they shall be listed in the “UTC Qualified Distributor List” as per ASQR-01.

**PROPRIETARY DATA NOTICE TO ALL RECEIVING THIS DOCUMENT**

The information contained in this document was developed at the private expense by Smith Tubular Systems-Laconia. The contents are deemed proprietary and all patent rights are reserved. Any submission is in a spirit of confidence and acceptance is deemed to be an acknowledgment of the confidential relationship. Information contained hereon not lawfully obtained from another source shall not be released, duplicated, used or disclosed in whole or in part for any procurement or manufacturing purpose without the prior written permission of Smith Tubular Systems-Laconia.
**NOTE TO NON-LCS SUPPLIERS:** Supplier shall provide a test piece/sample that is of the same Heat Lot that is similar in size and in the same material condition as the final product to allow Titeflex to perform the LCS Testing.

1. **NOTE:** ONLY Suppliers working under a controlled MCL LCS System shall follow the below requirements.
   
   o **P&W Source Inspection:** If Supplier has a resident or itinerant P&W SQA, PW Source Inspection is required and a PW source stamp on the packing slip shall indicate evidence of compliance.
   
   o **P&W LCS Required:** Parts/material shall be controlled to PW requirements for LCS per P&W-MCL Manual, Section F-14 and F-17. Certification to requirements must contain a statement, “Parts/ Material have been controlled to P&W requirements for LCS per P&W-MCL Manual F-17” or similar verbiage.
   
   o **P&W MCL Required:** Materials and processes shall be controlled and processed per the applicable specification. Supplier shall conduct tests, checks and calibrations in accordance with P&W-MCL Manual, Section F-23.

<table>
<thead>
<tr>
<th><strong>Titeflex Designed product Special Processor Requirements</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>If</strong></td>
</tr>
<tr>
<td>A Special Process is required on the product</td>
</tr>
</tbody>
</table>

**Q305-1 Aerojet Rocketdyne “End Use”**: The following applies with evidence of compliance to the requirements provided with shipment of parts:

<table>
<thead>
<tr>
<th><strong>Aerospace / Industry Standard and Catalog Parts</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>If</strong></td>
</tr>
<tr>
<td>A Special Process is required on the product</td>
</tr>
</tbody>
</table>

- Only the requirements in the Table above apply to Aerospace/Industry Standard and Catalog Parts.
- Titeflex waives the requirement on Standard COTS items for providing the Special Process Certs.

<table>
<thead>
<tr>
<th><strong>Aerojet Rocket Designed product Special Processor Requirements</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>If</strong></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>


ATION PROCEDURE

Titeflex Supplier Quality Requirements

<table>
<thead>
<tr>
<th>A NDT Processes is required</th>
<th>Special Processor shall be listed in PWR NDT Manual Appendix B</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Special Process other than NDT is required on the product</td>
<td>Contact Titeflex Buyer to look up an Approved Source on the Aerojet Rocketdyne Portal at <a href="https://accesssterocket.com">https://accesssterocket.com</a></td>
</tr>
</tbody>
</table>

- **o** When Aerojet Rocketdyne specification SR-059 is invoked by reference on Purchase order, it applies to Aerojet Rocketdyne designed parts only.
  1. Inspection Requirements: 100% Inspection of all parts for all characteristics
  2. Document preparation must be in accordance with para. 7.2.
  3. Raw Material Testing: Supplier shall test complete to specification by an ISO 17025 Certified Test Lab.

- **o** Marking Requirement: *Do not Mark completed product unless specifically noted on Purchase Order.* (Example NOTE: MARK PER RFPWA310 CL-xx).
  1. Only castings are required to be marked.

- **o** Aerojet Rocket Source Inspection of Product required prior to shipment

  NOTE: The Aerojet Rocketdyne Specifications are changing as the company separates themselves from Pratt Whitney.

- **o** RF0004-526 - Cross-Reference Index for Heritage Pratt & Whitney Specifications, and RF0008-000 WPB Cross-Reference Index for Heritage PW Quality Procedures, Methods & Standards

**Q306 Pratt & Whitney Canada “End Use”:** The following applies with evidence of compliance to these requirements provided with shipment of parts:

<table>
<thead>
<tr>
<th>Aerospace/Industry Standard and Catalog Parts</th>
</tr>
</thead>
<tbody>
<tr>
<td>If</td>
</tr>
<tr>
<td>A Special Process is required on the product</td>
</tr>
</tbody>
</table>

- **o** Only the requirements in the Table above apply to Aerospace/Industry Standard and Catalog Parts.
- **o** This Clause is used internally only as an in-house flag for Titeflex Processing on receipt.
- **o** Titeflex waives the requirement on Standard COTS items for providing the Special process Certs.

PROPRIETARY DATA NOTICE TO ALL RECEIVING THIS DOCUMENT

The information contained in this document was developed at the private expense by Smith Tubular Systems-Laconia. The contents are deemed proprietary and all patent rights are reserved. Any submission is in a spirit of confidence and acceptance is deemed to be an acknowledgment of the confidential relationship. Information contained hereon not lawfully obtained from another source shall not be released, duplicated, used or disclosed in whole or in part for any procurement or manufacturing purpose without the prior written permission of Smith Tubular Systems-Laconia.

Page 31 of 53
PWC & Titeflex Designed product Special Processor Requirements

<table>
<thead>
<tr>
<th>If</th>
<th>Then</th>
</tr>
</thead>
<tbody>
<tr>
<td>A NDT Processes is required</td>
<td>Special Processor shall be listed in PWC Document <strong>ANDTSL</strong></td>
</tr>
<tr>
<td></td>
<td>(Approved N.T.D. Supplier List or P&amp;W MCL Appendix A Sect I)</td>
</tr>
<tr>
<td>A Special Process other than NDT is required on the product</td>
<td>Special Processors shall be listed in P&amp;W MCL Manual Source Qualification List <strong>MCL-SQL-LIST</strong>. If the supplier intends to change to a new Special Processor, <strong>ASQR-01 Form 4</strong> shall be completed and submitted to Titeflex to submit to the customer for approval before changing sources.</td>
</tr>
</tbody>
</table>

- All wrought raw material in the form of sheet, bar, tubing, wire, and plate shall only be procured from PWA LCS Approved Sources. If a supplier has inventory that will have PWC End Use for wrought raw material that is from a Non-LCS Approved Source, supplier shall request use from Titeflex via PWC/PWA Authorization.

**NOTE:** This requirement does not apply to Aerospace/Industry Standard and Catalog Parts

- PWC Approved Special Process Sources are listed in P&W MCL Manual Source Qualification List **MCL-SQL-LIST**. NDT Approved Suppliers shall be listed in Document **PWC ANDTSL** (Approved N.D.T. Suppliers List)

- Inspection Sample Plan: Pratt & Whitney approved sample plan ASQR 20.1 applies.

- Marking Requirement: *Do not Mark completed product unless specifically noted on Purchase Order.* (Example **NOTE:** MARK PER CPW 10 CL-xx).
  1. Only castings are required to be marked.

- If Supplier is a Distributor they shall be listed in the “UTC Qualified Distributor List” as per ASQR-01.

1. **NOTE:** ONLY Suppliers working under a controlled MCL LCS System shall follow the below requirements.

- PW Source Inspection: If Supplier has a resident or itinerant PW SQA, PW Source Inspection is required and a PW source stamp on the packing slip shall indicate evidence of compliance.

- PWC LCS Required: Parts/Materials shall be controlled to PWC requirements for LCS per PWC-MCL Manual, Section FC-14 and F-17. Certification to requirements must contain a statement, “Parts/ Material have been controlled to PWC requirements for LCS per PWC-MCL Manual F-17” or similar verbiage.

- PWC LCS Required: Materials and processes shall be controlled and processed per the applicable specification. Supplier shall conduct tests, checks and calibrations in accordance with PWC-MCL Manual, Section F-23.

**PROPRIETARY DATA NOTICE TO ALL RECEIVING THIS DOCUMENT**

The information contained in this document was developed at the private expense by Smith Tubular Systems-Laconia. The contents are deemed proprietary and all patent rights are reserved. Any submission is in a spirit of confidence and acceptance is deemed to be an acknowledgment of the confidential relationship. Information contained hereon not lawfully obtained from another source shall not be released, duplicated, used or disclosed in whole or in part for any procurement or manufacturing purpose without the prior written permission of Smith Tubular Systems-Laconia.
Titeflex Supplier Quality Requirements

- Supplier must conform to the requirements of ASQR-01, SQOP01-01, SCOP-DQR, SQOP09-03 and UTCQR-09.1.

**NOTE TO NON-LCS SUPPLIERS:** Supplier shall provide a test piece/sample of the same Heat Lot that is similar in size and in the same material condition as the final product to allow Titeflex to perform the LCS Testing.

Q306-1 Pratt Whitney Canada APU Division “End Use”: Pratt Canada and Hamilton Sundstrand Design. The following applies with evidence of compliance to these requirements provided with shipment of parts:

<table>
<thead>
<tr>
<th><strong>Aerospace/Industry Standard and Catalog Parts</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>If</strong></td>
</tr>
<tr>
<td>A Special Process is required on the product</td>
</tr>
</tbody>
</table>

- Only the requirements in the Table above apply to Aerospace/Industry Standard and Catalog Parts.
- This Clause is used internally only as an in-house flag for Titeflex Processing on receipt.
- Titeflex waives the requirement on Standard COTS items for providing the Special process Certs.

<table>
<thead>
<tr>
<th><strong>PWC &amp; Titeflex Designed product Special Processor Requirements</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>If</strong></td>
</tr>
<tr>
<td>A NDT Processes is required</td>
</tr>
<tr>
<td>A Special Process is required on the product</td>
</tr>
</tbody>
</table>

- Comply with the latest revision of United Technologies Aerospace Supplier Quality Requirements ASQR-01, HSM17 and HSM19.
- All wrought raw material in the form of sheet, bar, tubing, wire, and plate shall only be procured from PWA LCS Approved Sources. If a supplier has inventory that will have

**PROPRIETARY DATA NOTICE TO ALL RECEIVING THIS DOCUMENT**

The information contained in this document was developed at the private expense by Smith Tubular Systems-Laconi. The contents are deemed proprietary and all patent rights are reserved. Any submission is in a spirit of confidence and acceptance is deemed to be an acknowledgment of the confidential relationship. Information contained hereon not lawfully obtained from another source shall not be released, duplicated, used or disclosed in whole or in part for any procurement or manufacturing purpose without the prior written permission of Smith Tubular Systems-Laconi.
PWC End Use for wrought raw material that is from a Non-LCS Approved Source, supplier shall request use from Titeflex via PWC/PWA Authorization.

NOTE: This requirement does not apply to Aerospace/Industry Standard and Catalog Parts

- APU Approved Special Process Sources are listed in P&W MCL APU Source Qualification List MCL-APU-SQ-LIST. NDT Approved Suppliers shall be listed in Document PWC ANDTSL (Approved N.D.T. Suppliers List)
- Inspection Sample Plan: Pratt & Whitney approved sample plan ASQR 20.1 applies.
- Marking Requirement: *Do not Mark completed product unless specifically noted on Purchase Order.* (Example NOTE: MARK PER CPW 10 CL-xx)
  1. Only castings are required to be marked.
  2. If Supplier is a Distributor they shall be listed in the “UTC Qualified Distributor List” as per ASQR-1.

2. **NOTE:** ONLY Suppliers working under a controlled MCL LCS System shall follow the below requirements.

- PW Source Inspection: If Supplier has a resident or itinerant PW SQA, PW Source Inspection is required and a PW source stamp on the packing slip shall indicate evidence of compliance.
- PWC LCS Required: Parts/Materials shall be controlled to PWC requirements for LCS per PWC-MCL Manual, Section FC-14 and F-17. Certification to requirements must contain a statement, “Parts/ Material have been controlled to PWC requirements for LCS per PWC-MCL Manual F-17” or similar verbiage.
- PWC LCS Required: Materials and processes shall be controlled and processed per the applicable specification. Supplier shall conduct tests, checks and calibrations in accordance with PWC-MCL Manual, Section F-23.
- Supplier must conform to the requirements of ASQR-01, SQOPDQR, SCOP-DQR, SQOP09-03 and UTCQR-09.1.

**NOTE TO NON-LCS SUPPLIERS:** Supplier shall provide a test piece/sample of the same Heat Lot that is similar in size and in the same material condition as the final product to allow Titeflex to perform the LCS Testing.

**Q307 Pratt and Whitney Engineering Source Approval (ESA):** PWA 370 is imposed on this item. The Supplier is required to supply, with shipment, a copy of the latest Process Approval Record for this item.

**Q308 Pratt & Whitney Canada Engineering Source Approval (ESA):** CPW 135 and SQOP01-01 and SCOP-DQR are imposed on this item. The Supplier is required to supply, with shipment, a copy of the latest Process Approval Sheet number and revision matching its records. This statement shall reference CPW 135. **NOTE:** When PSAR is required by the SPD Document pay special attention to Para. 7.5.1 and 7.15 of SCOP-DQR.

**PROPRIETARY DATA NOTICE TO ALL RECEIVING THIS DOCUMENT**

The information contained in this document was developed at the private expense by Smith Tubular Systems-Laconia. The contents are deemed proprietary and all patent rights are reserved. Any submission is in a spirit of confidence and acceptance is deemed to be an acknowledgment of the confidential relationship. Information contained hereon not lawfully obtained from another source shall not be released, duplicated, used or disclosed in whole or in part for any procurement or manufacturing purpose without the prior written permission of Smith Tubular Systems-Laconia.

Page 34 of 53
Q309 Bell Helicopter – Textron “End Use”: Subcontractors or Sub-Tier Suppliers, used in the performance of this Purchase Order, are required to follow the requirements of 7853-56249 - Bell Standard PO Terms and Conditions and 299-100-837 Approved Material Sources.

<table>
<thead>
<tr>
<th>Bell Helicopter Special Processor Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>If</td>
</tr>
<tr>
<td>Bell Helicopter Designed Part with Bell Specification</td>
</tr>
<tr>
<td>Bell Helicopter Designed Part with 3rd Party Standard</td>
</tr>
<tr>
<td>Titeflex Drawing with Bell Helicopter Specification</td>
</tr>
</tbody>
</table>

Q310 Middle River Aircraft “End Use”: Subcontractors or Sub-Tier Suppliers, used in the performance of this Purchase Order, are required to follow the requirements of MRAS 9000.

- All Special Processes shall be performed by Processors listed on the MRAS Approved Special Processors Listing.

<table>
<thead>
<tr>
<th>Middle River Special Processor Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>If</td>
</tr>
<tr>
<td>Middle River Designed Part with Middle River Specification</td>
</tr>
<tr>
<td>Boeing Designed Product</td>
</tr>
<tr>
<td>GE Designed Part with GE Specification</td>
</tr>
</tbody>
</table>

- For GE Designed Parts the requirements of either Q300 or Q301 will also apply.
  1. The supplier shall meet the GE Aviation Joint Affiliates Supplier Quality System Requirements per GE S-1005.
  2. The supplier shall meet the GE Aviation Joint Affiliates - Supplier First Article/Characteristic Accountability, Verification and Quality Planning per GE S-1007 latest version.

Q311 Boeing Long Beach “End Use”: Subcontractors or sub-tier Suppliers used in the performance of this order are required to use only Boeing Approved Process Sources as listed on the
Boeing Website section for D1-4426 Special Processors. The requirements of Form X31764 Latest Revision apply. Form available at: [http://www.boeingsuppliers.com/quality.html](http://www.boeingsuppliers.com/quality.html)

Instructions for Website: Under the Additional Requirements / Information Menu Click on (X31764 – BCA Quality Purchasing Data Requirements) and the latest Document should open.

<table>
<thead>
<tr>
<th>Boeing Designed product Special Processor Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>If</td>
</tr>
<tr>
<td>A Special Process is required on the product</td>
</tr>
</tbody>
</table>

- Customer Clause H900, is imposed on all procured components. Please pay close attention to the following sections.
  1. (Section A) General Requirements
  2. (Section A Para. 25) Counterfeit Good
  3. (Section A Para. 26) Material Substitution Prohibition

- The Seller will place the following statement on the shipping documentation of all shipments to Titeflex:

  “Seller hereby acknowledges that the parts and/or materials being shipped under this order are intended for use under Boeing’s Federal Aviation Administration (FAA) issued Production Certificate 700 and no articles (or constituent parts thereof) or the accompanying paperwork (e.g., packages, shippers, etc.) contain any Federal Aviation Administration – Parts Manufacturing Approval (FAA-PMA) Markings.” Every article of foreign origin imported into the United States shall be marked with the country of origin in accordance with U.S. Customs regulations 19CFR134

Q312 **Safran Landing Systems “End Use”**: Subcontractors or sub-tier Suppliers, used in the performance of this Purchase Order are required to follow Safran Landing Systems SREQ-SLS-001 and GRP-0087.

<table>
<thead>
<tr>
<th>Safran Landing Systems Designed product Special Processor Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>If</td>
</tr>
</tbody>
</table>

**PROPRIETARY DATA NOTICE TO ALL RECEIVING THIS DOCUMENT**

The information contained in this document was developed at the private expense by Smith Tubular Systems-Laconia. The contents are deemed proprietary and all patent rights are reserved. Any submission is in a spirit of confidence and acceptance is deemed to be an acknowledgment of the confidential relationship. Information contained hereon not lawfully obtained from another source shall not be released, duplicated, used or disclosed in whole or in part for any procurement or manufacturing purpose without the prior written permission of Smith Tubular Systems-Laconia.
The Part is a **Safran Landing Systems** Designed product

<table>
<thead>
<tr>
<th>Example of some Commodity Group Codes are as follows:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A2 – Machining of complete products</td>
</tr>
<tr>
<td>E – Forging Manufacturers</td>
</tr>
<tr>
<td>I2 – Standard Accessory Stocklists</td>
</tr>
<tr>
<td>J2 – Non-Destructive Testing Sources</td>
</tr>
<tr>
<td>R1 – Raw Material Manufacturers of Metallic Materials</td>
</tr>
<tr>
<td>(Then you should see a list of Approved Vendors)</td>
</tr>
</tbody>
</table>

A **Special Process** is required on the product

- Contact the Titeflex Buyer for assistance

- The following note applies to all orders where this clause is imposed and shall also be flowed down to any of the supplier Sub-Tier Suppliers used: “This Purchase Order is for a **Safran Landing Systems** contract and the requirements of SREQ-SLS-001 and GRP-0087 apply”.

- Industry Standard and Titeflex Designed Parts shall meet the General Requirements of SREQ-SLS-001 and GRP-0087 requirements for S3 and Code C but are not required to be “**Safran Landing Systems**”. Approved Sources.

- Forging Suppliers: The requirements of SREQ-SLS-002 apply.

- **REACH Compliance** – Passivation of Stainless Steel using Sodium Dichromate will not be allowed after 21st of September 2017. **Safran Landing Systems** Drawings generically refer to AMS2700 and suppliers are able to choose types based on the material they are processing. MBD has validated that Method 1 Types 6 to 8 shall be used to replace Sodium Dichromate depending on the alloy being used.

**Q313 GKN Aerospace**: Subcontractors or sub-tier Suppliers, used in the performance of this Purchase Order, are required to follow (SQAR 211).

<table>
<thead>
<tr>
<th><strong>GKN Aerospace Requirements based on Design Authority Requirements</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>If</strong></td>
</tr>
<tr>
<td>GE Designed Part</td>
</tr>
<tr>
<td>PWA Designed Part</td>
</tr>
<tr>
<td>Rolls Royce Designed Part</td>
</tr>
<tr>
<td>MTU Designed Part</td>
</tr>
</tbody>
</table>

**PROPRIETARY DATA NOTICE TO ALL RECEIVING THIS DOCUMENT**

The information contained in this document was developed at the private expense by Smith Tubular Systems-Laconia. The contents are deemed proprietary and all patent rights are reserved. Any submission is in a spirit of confidence and acceptance is deemed to be an acknowledgment of the confidential relationship. Information contained hereon not lawfully obtained from another source shall not be released, duplicated, used or disclosed in whole or in part for any procurement or manufacturing purpose without the prior written permission of Smith Tubular Systems-Laconia.
Titeflex Supplier Quality Requirements

- For GKN Aerospace Sources for Special Processes and Laboratory Services please contact the Titeflex Buyer.

Q314 Triumph Aerostructures “End Use”: A sub-contractors or sub-tier Supplier, used in the performance of this Purchase Order, is required to follow the Triumph Aerostructures - Supplier Quality Assurance Requirements (SQAR) and SQR-010 as applicable.

<table>
<thead>
<tr>
<th>Triumph Aerostructures - Special Processor Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>If</strong></td>
</tr>
<tr>
<td>Program Code: CA / CS-C17 = Boeing Designed Part with Boeing Specification</td>
</tr>
<tr>
<td>Program Code: EE-767 = Boeing Designed Part with Boeing Specification</td>
</tr>
</tbody>
</table>

- A Program Code will be referenced in the Purchase Order body as applicable. If no code is referenced on the Purchase Order, please contact the Titeflex buyer for code applicability.

Q315 Cessna “End Use”: Suppliers Quality systems shall comply with the appropriate Quality Systems Standard along with the Cessna specific quality requirements for Manufactures, Distributors and Special Processors as applicable. The Supplier shall work to the requirements in (CSQR) Cessna Quality Requirements for Suppliers. Special Processors can be located at the following Web Site: [https://www.supplier.cessna.com](https://www.supplier.cessna.com)

Q316 Honeywell “End Use”: Subcontractors or sub-tier Suppliers used in the performance of this Purchase Order are required to follow Honeywell’s SPOC Manual and SPOC Manual Section 128.

<table>
<thead>
<tr>
<th>Honeywell - Special Processor Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>If</strong></td>
</tr>
</tbody>
</table>

PROPRIETARY DATA NOTICE TO ALL RECEIVING THIS DOCUMENT

The information contained in this document was developed at the private expense by Smith Tubular Systems-Laconia. The contents are deemed proprietary and all patent rights are reserved. Any submission is in a spirit of confidence and acceptance is deemed to be an acknowledgment of the confidential relationship. Information contained hereon not lawfully obtained from another source shall not be released, duplicated, used or disclosed in whole or in part for any procurement or manufacturing purpose without the prior written permission of Smith Tubular Systems-Laconia.
Honeywell Designed Part with Honeywell & 3rd Party Specifications

Special Processors shall be certified by Honeywell and be listed in the Honeywell Approved Supplier Portal. For assistance with Approved Special Processors please contact the Titeflex Buyer for the contract.

NOTE: Nadcap Approval shall be maintained.

- SPOC Group Number: SPOC 002 Applies (See Section 3.0 of SPOC Manual)
- Supplier shall pay special attention to SPOC Manual para. 1.2.1, SPOC 140.4, SPOC 165, and SPOC 419
- Supplier shall notify Titeflex when a change is made to a different supplier from the original FAI submitted to Titeflex. A Delta FAI is also required as part of this change process.

Q317 Lockheed Martin Aeronautics “End Use”: Subcontractors or sub-tier suppliers, used in the performance of this Purchase Order, are required to perform 100% Inspection on all parts and characteristics, and an inspection report is required with each shipment. The supplier shall ensure all Special Processes performed are LMA Approved.

- Only OCM (Original Component Manufacturer) or their authorized Distributors are Approved to supply product to Titeflex for LMA End Use.
- LMA CORPDOC 3 (Dated 2017) Sect. 6 paragraphs A thru H apply as applicable.
- Parts shall not contain Hexavalent Chromium in a concentration greater than 0.1 percent by weight in any homogenous material.

<table>
<thead>
<tr>
<th>If</th>
<th>Then</th>
</tr>
</thead>
<tbody>
<tr>
<td>LMA Designed Part with Lockhead Specification</td>
<td>Special Processors shall be listed in document QCS-001 which shall be made available by Titeflex Aerospace.</td>
</tr>
<tr>
<td>LMA Designed Part with 3rd Party Standard</td>
<td>Special Processors shall be listed in document QCS-001 which shall be made available by Titeflex Aerospace.</td>
</tr>
<tr>
<td>STS/Titeflex Drawing with LMA Specification</td>
<td>Special Processors shall be listed in document QCS-001 which shall be made available by Titeflex Aerospace.</td>
</tr>
</tbody>
</table>

Q318 Hamilton Sundstrand Trident D-5 Program “End Use”: Subcontractors or sub-tier Suppliers used in the performance of this order shall comply with the following:

- Comply with the latest revision of United Technologies Aerospace Supplier Quality Requirements ASQR-01, HSM17 and HSM19.
Titeflex Supplier Quality Requirements

- Use Hamilton Sundstrand Approved Special Process Sources. Once a source and the Suppliers processing has been selected it cannot be changed without customer approval.
- All work instructions, procedures for production processes, Inspection, NDT, and Special Processes are frozen at the successful acceptance of the first production hardware. For any changes to the procedures, material, process specification, or Supplier requires prior notification and approval by Titeflex Quality Engineering.
- This order has a Defense Priorities and Allocations System (DPAS) Priority Rating of DX-A2 in support of authorized national defense programs (15 CFR700).

### Hamilton Sundstrand Special Processor Requirements

<table>
<thead>
<tr>
<th>If</th>
<th>Then</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hamilton Sundstrand Designed Part with HS Specification</td>
<td>Special Processors shall be listed in Report80 which shall be made available by Titeflex Aerospace.</td>
</tr>
<tr>
<td>Hamilton Sundstrand Designed Part with 3rd Party Standard</td>
<td>Special Processors shall be listed in Report80 which shall be made available by Titeflex Aerospace.</td>
</tr>
<tr>
<td>STS/Titeflex Drawing with HS Specification or 3rd Party Specification</td>
<td>Special Processors shall be listed in Report80 which shall be made available by Titeflex Aerospace.</td>
</tr>
</tbody>
</table>

### Q319 Goodrich Landing Gear “End Use”:
Subcontractors or sub-tier Suppliers, used in the performance of this Purchase Order, are required to follow the Special Processor requirements of DOC 200 and DOC 300.

- Comply with the latest revision of UTAS-SCM-PRO-0003

<table>
<thead>
<tr>
<th>Goodrich Landing Gear Special Processor Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>If</td>
</tr>
<tr>
<td>Goodrich LG Designed Part with Goodrich LG Specification</td>
</tr>
<tr>
<td>Goodrich LG Designed Part with 3rd Party Standard</td>
</tr>
<tr>
<td>STS/Titeflex Drawing with Goodrich LG Specification</td>
</tr>
</tbody>
</table>
Titeflex Supplier Quality Requirements

Q320 Parker Hannifin Corporation “End Use”: Subcontractors or sub-tier suppliers used in the performance of this order shall comply with the requirements of Document PD1000 current Issue.
   o All Suppliers performing a Special Process shall be listed on Parkers Approved Process Suppliers listing.

Q321 - Parker Stratoflex “End Use”: Subcontractors or sub-tier Suppliers used, in the performance of this Purchase Order, are required to follow the requirements of Parker Stratoflex Supplier Quality Assurance Manual.
   o Special Processors shall be listed on the Parker Web Site.
   o [Web link]

Q322 Titeflex Commercial Product Shipments: A copy of the Titeflex Powder Form, Teflon powder composition and physical test report) shall be provided with each lot of hose shipped.
   o In lieu of providing a hard copy, Titeflex may scan a copy of the Powder Form into the billet archive folder located in the Laconia Aerospace Quality drive. The Powder Form shall be the form identified within Titeflex Procedure, MES 107.
   o Each lot of hose shall be physically marked with the heat number; however when it is impractical to mark the hose, a tag identifying the heat number shall be attached to the hose. All material used shall be traceable back to the raw material lot number or heat lot number.
   o A certificate of conformance is not required. Process specifications for manufacturing hose, braid, braided hose, and extruded hose are frozen and shall not be revised without written approval or authorization from Titeflex Engineering. Material Review Board (MRB) responsibility for use as is and repair dispositions are not delegated to Titeflex. MRB requests shall be forwarded to Titeflex Quality and Engineering for review and disposition.

Q323 Goodrich Aerostructures “End Use”: Subcontractors or sub-tier Suppliers used, in the performance of this Purchase Order, are required to follow the requirements of Goodrich Document ASQR-01 & ASQR-01-AA.
   o The Goodrich Qualified Supplier Document (QSD) lists processes that require Goodrich Approval per RPS 1.000-2. Processors may only perform those processes they are listed for in the QSD.

<table>
<thead>
<tr>
<th>Goodrich Aerostructures Special Processor Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>If</td>
</tr>
<tr>
<td>------------------------------------------------------</td>
</tr>
<tr>
<td>Goodrich Aerostructures Designed Part or Titeflex Drawing Part with Goodrich Specification</td>
</tr>
</tbody>
</table>
### Titeflex Supplier Quality Requirements

| Goodrich Aerostructures Designed Part with 3rd Party Standard | Special Processors shall be listed in the QSD (Qualifies Supplier Document) on the Customer website. Contact the Titeflex Buyer for assistance. |

**Note:** If supplier does not have access to this site, contact the Titeflex Buyer for assistance.

### Q324 Boeing Commercial “End Use”:
Subcontractors or sub-tier Suppliers used, in the performance of this Purchase Order, are required to follow the requirements of Clause 6055 (Seller Quality Requirements) and 6056 (Supplemental Quality Requirements). Special Process Approved Sources can be located at the following web site.

Access to Boeing Terms and Conditions clauses (example: 6055 or 6056) are located in the following location.

**http://www.boeingsuppliers.com/tc0692/**

- Every article of foreign origin imported into the United States shall be marked with the country of origin in accordance with U.S. Customs regulations 19CFR134.

### Boeing Designed product Special Processor Requirements

<table>
<thead>
<tr>
<th>If</th>
<th>Then</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Special Process is required on the product</td>
<td>Special Processor shall be listed in the Boeing D1-4426 Listing. <a href="http://www.boeingsuppliers.com/d14426/index.html">http://www.boeingsuppliers.com/d14426/index.html</a> Special Processors shall maintain their Nadcap Approval for the Process Type</td>
</tr>
</tbody>
</table>

### Q325 Goodrich Actuation Systems “End Use”:
Subcontractors or sub-tier Suppliers used, in the performance of this Purchase Order, are required to follow the requirements of Goodrich Document 981-151-001 (Supplier Quality Assurance Requirements), 981-151-005 (Sub-Contract/Supplier Special Processing and Raw Material Procurement Control) and 981-151-003 (First Article Inspection).

### Goodrich Actuations Special Processor Requirements

<table>
<thead>
<tr>
<th>If</th>
<th>Then</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goodrich Actuations Designed Part with Goodrich Specification</td>
<td>Special Processors shall be listed in Document 981-151-005. A copy of 981-151-005 is available from Titeflex Buyer and is only good for the Month that is referenced on Appendix A of the document. If supplier is certifying to the 3rd party standard see example below: Passivation per AMS2700 Method 1, Type II IAW 914-032-101</td>
</tr>
<tr>
<td>Goodrich Actuations Designed Part with 3rd Party Standard</td>
<td>Special Processors shall be listed in Document 981-151-005. The 3rd Party Standard that is equivalent to the Goodrich Specification is still required to be listed in the GASW. A copy of 981-151-005 is still required to be listed in the GASW. A copy of 981-151-005 is...</td>
</tr>
</tbody>
</table>
Q326 Hamilton Sundstrand Space/NASA “End Use”: Subcontractors or sub-tier Suppliers used, in the performance of this Purchase Order, are required to follow the requirements of ASQR-01, HSM10 and HSM19. The supplier shall ensure that all Special Processes are performed by Approved Sources as noted in Report 80.

<table>
<thead>
<tr>
<th>Hamilton Sundstrand Special Processor Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>If</strong></td>
</tr>
<tr>
<td>Hamilton Sundstrand Designed Part</td>
</tr>
<tr>
<td>with HS Specification or 3rd Party Specification</td>
</tr>
<tr>
<td>STS/Titeflex Drawing with a Hamilton Sundstrand</td>
</tr>
<tr>
<td>or 3rd Party Specification</td>
</tr>
<tr>
<td>(Titeflex Drawing will Note Hamilton Sundstrand</td>
</tr>
<tr>
<td>Drawing at the bottom)</td>
</tr>
</tbody>
</table>

- When a part notes that MARS testing is required on the Titeflex Purchase Order the following is required per HSM10 Appendix “G” Section G.6 para 3.
  - **Metallic Part:** One (1) inch test sample of the material used to fabricate the part, in the final heat treat condition.
  - **Plated/Coated Part:** One coated test panel shall be included with the shipment. The panel shall meet the applicable specification. If the specification does not define the test specimen, the test specimen shall be approx. 1” x 4” x .040 and representative of the base material of the actual part.
  - **Rubber O-Rings:** 15 actual parts.
  - **Plastic Parts:** One inch test sample of material in the final engineering drawing condition.

**NOTE:** Package each set separately and add a label to the package made out as follows: ATTENTION: PAUL GOSSELIN

Q327 LMA Ft. Worth – F-35 Program “End Use”: Subcontractors or sub-tier suppliers, used in the performance of this Purchase Order, are required to perform 100% Inspection on all parts and characteristics. The supplier shall ensure all Special Processes performed are Approved Sources listed in QCS-001, per Appendix QX, Appendix QJ, Addendum to Appendix QJ and is available on the following Website: [https://sqm.lmaeronautics.com/Login.aspx?Returnurl=%2Fdefault.aspx](https://sqm.lmaeronautics.com/Login.aspx?Returnurl=%2Fdefault.aspx)
### Lockheed Martin Special Processor Requirements

<table>
<thead>
<tr>
<th>If</th>
<th>Then</th>
</tr>
</thead>
<tbody>
<tr>
<td>LMA Designed Part with Lockheed Specification</td>
<td>Special Processors shall be listed in document <strong>QCS-001</strong> which shall be made available by STS/Titeflex Aerospace Buyer.</td>
</tr>
<tr>
<td>LMA Designed Part with 3(^{rd}) Party Standard</td>
<td>Nadcap Approved Source Required for the Process Type</td>
</tr>
<tr>
<td>STS/Titeflex Drawing and 3(^{rd}) Party or Titeflex Specification</td>
<td>Nadcap Approved Source Required for the Process Type</td>
</tr>
</tbody>
</table>

- A copy of the supplier’s Inspection Report is required with each shipment.
- Seller shall ensure all Seller sub-tier Purchase Orders and/or associated purchase order documents for Buyer-controlled processes include the following data elements and statements:
  - Supplier’s unique LMA identification number (vendor code) and all LMA unique “process codes” for each Buyer-controlled process to be performed.
  - A statement with the words, "Processing to be accomplished in performance of this Purchase Order is directly related to Lockheed Martin Aeronautics Company Purchase Order and must be accomplished in accordance with process specification(s) on this purchase order and Lockheed Martin Aeronautics Company Appendix QJ".
  - The supplier must file and maintain a copy of all purchase orders containing the above statement and make these available upon request for review by Buyer.
  - Supplier must submit a Certificate of Conformance (CofC) with a unique certification number containing the following information:
    A. Title and specification number, including revision level of the process.
    B. Name and address of the process or non-destructive testing (NDT) facility,
    C. Supplier unique LMA identification number (vendor or processor code).
    D. Seller is not required to use sources listed in QCS-001 for standard hardware (nuts, bolts, washers, etc.) ordered to military, federal or industry standards or specifications for metallic raw material purchased from a mill.

**Note:** If processor is utilized based on a Nadcap approval, a statement to the effect “Source utilized based on current Nadcap accreditation” shall be included.

- Date the CofC was issued.
- Purchase order part number.
- Quantity of parts to include quantity accepted / rejected.
- Signature and title of authorized quality agent of Titeflex.
I. Fracture durability classification or serialization, when required.
   o A statement ensuring that the supplier suitably wraps boxes or racks parts to guard against shipping damage, and to apply rust or corrosion protection.
   o A statement requiring the supplier to identify specification(s) title, specific revision level(s) and drawing(s) requirement(s) to be performed by a QCS-001 source.
      
      Or,
      
      o Include Supplier unique LMA identification number (vendor code) and a statement with the words “Processing to be accomplished in performance of this Purchase Order is directly related to Lockheed Martin Aeronautics Company Purchase Order and must be accomplished in accordance with process specification(s) on this purchase order and Lockheed Martin Aeronautics Company Appendix QJ”.

      o Titeflex Sub-tier(s) shall meet all requirements of the latest version of Appendix QX, Appendix QJ and Addendum to Appendix QJ when Titeflex sub-tier(s) are performing any Buyer-controlled process identified in QCS-001.

      o When QCS-001 controlled processes are performed by Titeflex Sub-tier(s), Supplier shall provide Buyer at time of Buyer’s acceptance, objective evidence that supplier used is/are approved by Buyer on date of acceptance by Buyer, regardless of when processing was performed but subsequently is/are not approved at time of Buyer’s acceptance, supplier shall contact Buyer for item(s) disposition.

      A. Purchasing shall be responsible for meeting the above requirement at the front end of procuring material.

      B. Titeflex Receiving Inspection shall be responsible for verifying the above requirement at the tail end of the process using the Lockheed Martin Aeronautics (LMA) CofC template.

Q328 ULA (United Launch Alliance) “End Use”: Subcontractors or sub-tier Suppliers used, in the performance of this Purchase Order, are required to follow the requirements of Special Provision DOC 253-01 Quality Clause QC014 which have been laid out in the below chart.

<table>
<thead>
<tr>
<th>ULA (United Launch Alliance) Special Processor Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>If</td>
</tr>
<tr>
<td>ULA Designed with ULA or 3rd Party Specification (QC014 of DOC 253-01)</td>
</tr>
<tr>
<td>STS/Titeflex Part and 3rd Party or Titeflex Specification</td>
</tr>
<tr>
<td>3rd Party Std Part and 3rd Party</td>
</tr>
<tr>
<td>Then</td>
</tr>
<tr>
<td>Utilize the ULA Special Process Approval List. Available at <a href="http://suppweb.ulalaunch.com/AppProcWeb/">http://suppweb.ulalaunch.com/AppProcWeb/</a></td>
</tr>
<tr>
<td>ULA Designed Parts must utilize above link for Special Processors.</td>
</tr>
<tr>
<td>Nadcap Approved Source Required for the Process Type</td>
</tr>
<tr>
<td>Nadcap Approved Source Required for the Process Type</td>
</tr>
</tbody>
</table>

PROPRIETARY DATA NOTICE TO ALL RECEIVING THIS DOCUMENT
The information contained in this document was developed at the private expense by Smith Tubular Systems-Laconia. The contents are deemed proprietary and all patent rights are reserved. Any submission is in a spirit of confidence and acceptance is deemed to be an acknowledgment of the confidential relationship. Information contained hereon not lawfully obtained from another source shall not be released, duplicated, used or disclosed in whole or in part for any procurement or manufacturing purpose without the prior written permission of Smith Tubular Systems-Laconia.
o Certificate of Conformance required for all Special Processes performed.
  o Special Processor Certification requires are as follows:
    1. Contract Number
    2. Part number including revision level
    3. Serial and/or lot number(s) (as applicable)
    4. Process specification number and revision level
    5. Processing date
    6. Name and address of the processor(s) performing each process
    7. A certification statement that the special process was performed per the applicable drawing/specification requirements

o The Certificate of Conformance shall be signed, with title, and dated by an authorized Contractors representative. ULA Approval of any processor does not relieve the Contractor of Contractor’s requirement to comply with the terms of the Contract.

**Q329 Raytheon Andover / Missile Systems or Technical Services “End Use”:** Subcontractors or Sub-Tier Suppliers, used in the performance of the Purchase Order, are required to meet the requirements of Raytheon Quality Note (RQN) JY or TC, which can be accessed at the Customer website.

<table>
<thead>
<tr>
<th>Raytheon Technical Services Special Processor Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>If</strong></td>
</tr>
<tr>
<td>RaytheonDesigned Part with Raytheon Specifications</td>
</tr>
<tr>
<td>Raytheon Designed Part with 3rd Party Standard</td>
</tr>
</tbody>
</table>
Q331 Woodward / GE Aviation - Duarte “End Use”: Subcontractors or Sub-Tier Suppliers, used in the performance of this Purchase Order, are required to follow the requirements of 2-OF-01422.
  o All Special Processes shall be performed by Nadcap Approved Sources for that Process Type. Evidence of Approved Source shall be provided by inclusion of Special Process Certificate of Conformance with each shipment.

Q332 Hamilton Sundstrand Corporation “End Use”: Subcontractors or sub-tier Suppliers used in the performance of this order shall comply with the following:
  o Suppliers shall work to the latest revision of UTC Aerospace Systems Supplier Quality Requirements ASQR-01, HSM17, HSM19 and HSM236.

<table>
<thead>
<tr>
<th>Hamilton Sundstrand Special Processor Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>If</strong></td>
</tr>
<tr>
<td>Hamilton Sundstrand Designed Part with HS Specification</td>
</tr>
<tr>
<td>Hamilton Sundstrand Designed Part with 3rd Party Standard</td>
</tr>
<tr>
<td>Titeflex Drawing with a HS Specification</td>
</tr>
<tr>
<td>Titeflex Drawing and 3rd Party or Titeflex Specification</td>
</tr>
<tr>
<td>3rd Party Standard Part Numbers and 3rd Party Specification</td>
</tr>
</tbody>
</table>

Q333 Rolls Royce PLC (UK) “End Use”: Subcontractors or Sub-tier Suppliers, used in the performance of this Purchase Order, are required to follow Rolls Royce SABRe Manual Requirements. A general breakout is noted in the Tables and Paragraphs below.

**PROPRIETARY DATA NOTICE TO ALL RECEIVING THIS DOCUMENT**

The information contained in this document was developed at the private expense by Smith Tubular Systems-Laconia. The contents are deemed proprietary and all patent rights are reserved. Any submission is in a spirit of confidence and acceptance is deemed to be an acknowledgment of the confidential relationship. Information contained hereon not lawfully obtained from another source shall not be released, duplicated, used or disclosed in whole or in part for any procurement or manufacturing purpose without the prior written permission of Smith Tubular Systems-Laconia.
Suppliers of Special Processes require Approval in accordance with the relevant Quality System (i.e. Rolls Royce PLC) and shall meet the requirements of RRP50000 when imposed on a Rolls Royce Drawing.

NOTE: For Titeflex Designed product the supplier shall be AS9100 Certified otherwise the only requirement is noted in the Table below.

<table>
<thead>
<tr>
<th>Rolls Royce PLC (UK) Designed product shall only be manufactured by a Rolls Royce Approved Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>If</strong></td>
</tr>
<tr>
<td>Outsourcing of machining operations</td>
</tr>
<tr>
<td>A Special Process is required on the product</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aerospace/Industry Standard and Catalog Parts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>If</strong></td>
</tr>
<tr>
<td>Standard Part or Catalog Part</td>
</tr>
<tr>
<td>A Special Process is required on the product</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Raw Material Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>If</strong></td>
</tr>
</tbody>
</table>

**PROPRIETARY DATA NOTICE TO ALL RECEIVING THIS DOCUMENT**
The information contained in this document was developed at the private expense by Smith Tubular Systems-Laconia. The contents are deemed proprietary and all patent rights are reserved. Any submission is in a spirit of confidence and acceptance is deemed to be an acknowledgment of the confidential relationship. Information contained hereon not lawfully obtained from another source shall not be released, duplicated, used or disclosed in whole or in part for any procurement or manufacturing purpose without the prior written permission of Smith Tubular Systems-Laconia.
Titeflex Supplier Quality Requirements

<table>
<thead>
<tr>
<th>Rolls Royce PLC Specification</th>
<th>Mill Source: Raw Material shall be from a MLC101 &amp; MLC101-3 Approved Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerospace/Industry Standard Specification</td>
<td>Melt Source: Raw Material is required to be ISO 9001 Certified plus be a Rolls Royce Approved Source</td>
</tr>
<tr>
<td>Aerospace/Industry Standard Specification</td>
<td>Re-Processor: Raw Material is required to be ISO 9001 Certified plus Test to Specification by a Certified Test House that is Nadcap Approved</td>
</tr>
</tbody>
</table>

2. 100% Inspection is required for all characteristics unless the following is achieved:
   - The supplier has performed a Cpk study that yields a Cpk value of 2.0 or greater and has achieved this by satisfactory product verification / inspection records from 3 or more successive batches / lots containing a combined total of at least 25 parts.

3. Marking Requirements:
   - When a Rolls Royce (Allison / LHTEC) drawing calls out AS478 marking and EDT 500 or EDT 506 are noted on the drawing EDI 460 supersedes AS478. If EDT 500 or EDT 506 appears, use Table 3 of each document to find the appropriate marking method in EDI 460. Appendix C of EDI 460 provides instructions for converting marking content from AS478 and Appendix B Section 1.3 provides guidance for marking in limited space situations.
   - Where EDI 460 is noted on a Rolls Royce drawing mark as instructed by the drawing and EDI 460 requirements.

4. **FAIR Package Submittal & Approval requirements prior to first time shipment**
   - The following shall be submitted as a complete package to Titeflex for Rolls Royce Approval prior to the supplier first shipping to Titeflex.
     - **NOTE:** Suppliers are required to submit to Titeflex any source changes for Rolls Royce pre-approval before changes are made to Material Supplier or Special Process Suppliers after Rolls Royce FAIR Approval.
     - 4. A FAIR Content / Check Sheet shall be completed
     - 5. A FAIR Approval Form must be completed
     - 6. The following shall also form a part of the FAIR package:
       - 10. Ballooned Drawing
       - 11. Methods of manufacture
       - 12. Copy of Completed Router/Traveler Sheets
       - 13. NDT Data Cards and Instructions must be signed by a Rolls Royce Authorized Level III or by Rolls Royce
       - 14. Part Marking Verification sheet (Photo of Actual part marked)

The information contained in this document was developed at the private expense by Smith Tubular Systems-Laconia. The contents are deemed proprietary and all patent rights are reserved. Any submission is in a spirit of confidence and acceptance is deemed to be an acknowledgment of the confidential relationship. Information contained hereon not lawfully obtained from another source shall not be released, duplicated, used or disclosed in whole or in part for any procurement or manufacturing purpose without the prior written permission of Smith Tubular Systems-Laconia.
15. Quality Standards and Test Procedures

16. Casting / Forging Rolls Royce Approved Technique (FAIR Approval Form signed off by Rolls Royce)

17. Special Process Data Cards also referred to as Part Specific Work Instructions shall include the following:
   o Process Specification(s),
   o Sequential & Technical parameters of the process
   o Identify the issue status and date
   o Have a clear individual identity (e.g. part number or unique number traceable to the part number)
   o Reference inspection or special test piece / monitoring requirements

18. Inspection Method Sheet (IMS)

6.1 FAIR Package Requirements for Aerospace/ Industry Standards and Titeflex Designed Parts. Supplier shall work to the General Requirements

   Purchasing / Subcontracting
     o Stock Lists and Distributors to be ISO 9001 or TS16949 Approved
     o Raw Material of RR Material Specs – AS/EN/JISQ 9100 Approved and traceability to the raw material manufacturer is required.
     o Raw Material of Non-RR Material Specs – ISO 9001 or TS16949 Approved and Test to Specification
     o Supplier shall maintain records per Category B of Sabre2 Sect. A1.4 (6 Years Minimum)

Q334 UTC Production Part Approval Process (UPPAP): The requirements of UTC ASQR-09.2 apply to this order. The UPPAP Plan shall be forwarded to the Titeflex Buyer and they will forward to the Titeflex Focal Point.
   o The Titeflex Focal Point will review the plan and supply the necessary documents to the supplier
   o The default UPPAP submission level shall be 3 unless otherwise specified
   o The UPPAP evidence package shall be submitted at least 2 weeks prior to delivery of product.
Appendix B
Government FAR / DFARS Requirements

The following Government FAR and DFARS Clauses apply to all Purchase Orders. The latest version of the Government Clauses shall apply.

**FAR Sections:**

52.203-13 - Contractor Code of Business Ethics and Conduct
52.204-21 – Basic Safeguarding of covered Contractor Information Systems (Applies unless the supplier is furnishing available off-the-shelf items.)
52.209-1 - Qualification Requirements Applies when QML, QPL, QBL is cited in the description of the solicitation/order
52.509-6 - Protecting the Government’s interest when subcontracting with contractors debarred suspended, or proposed for debarment
52.209-9013 - Component QPL/QML Items
52.211-5 - Material Requirements (Part shall be newly manufactured)
52.211-14 - Notice of priority rating for national defense, emergency preparedness, and energy program use
52.211-15 - Defense Priority and Allocations Requirements
52.211-9023 - Substitution of item after award
52.215-19 - Notification of Ownership Changes
52.219-8 - Utilization of Small Business Concerns
52.222-21 - Prohibition of Segregated Facilities
52.222-26 - Equal Opportunity
52.222-35 - Equal Opportunity for Veterans
52.222-36 - Affirmative Action for Workers with Disabilities
52.222-40 - Notification of Employee Rights under the National Labor Relations Act
52.222-50 - Combating Trafficking in Persons
52.222-56 - Certification Regarding Trafficking in Persons Compliance Plan
52.223-11 - Ozone Depleting Substances
52.225-1 - Buy American Act -- Supplies
Titiflex Supplier Quality Requirements

52.225-3 - Buy American Act -- North American Free Trade Agreement -- Israeli Trade Act
52.225-5 – Trade Agreements Act

52.225-13 - Restrictions on certain Foreign Purchases
52.232-40 - Providing Accelerated Payments to Small Business Subcontractors
52.246-1 - Contractor Inspection Requirements
52.246-2 - Inspection of Supplies -- Fixed-Price
52.246-3 - Inspection of Supplies -- Cost-Reimbursement
52.246-4 - Inspection of Services -- Fixed Price
52.246-5 - Inspection of supplies--Fixed Price
52.246-6 - Inspection of Services - Cost Reimbursement
52.246-7 - Inspection - Time and Material and Labor Hour
52.246-8 - Inspection of Research and Development - Cost Reimbursement
52.246-9 - Inspection of Research and Development (Short Form)
52.246-11 - Higher level Contract Quality Requirements

The following FAR clause(s) apply to this contract if the value of the contract is equal to or exceeds $10,000:
52.222-40 - Notification of Employee Rights under the National Labor Relations Act

The following FAR clause(s) apply to this contract if the value of the contract is equal to or exceeds $30,000:
52.509-6 - Protecting the Government’s interest when subcontracting with contractors debarred, suspended, or proposed for debarment.
52.222-36 - Affirmative Action for Workers with Disabilities

The following FAR clause(s) apply to this contract if the value of the contract is equal to or exceeds $100,000:
52.222-35 - Equal Opportunity for Veterans
DFARS Sections:
252.204-7008 - Export-Controlled Items
252.223-7008 - Prohibition of Hexavalent Chromium
252.225-7001 - Buy American Act and Balance of Payments
252.246-7003 – Notification of Potential Safety Issues

Applies to all acquisitions between $3000 and $25,000 and to acquisitions above $25,000
252.225-7008 - Restrictions on acquisitions of Specialty Metals
252.225-7009 - Restrictions on Acquisitions of Certain Articles containing Specialty Metals
252.225-7010 - Commercial Derivative Military Article—Specialty Metals Compliance Certificate
252.225-7012 - Preference for Certain Domestic Commodities
252.225-7013 - Duty-Free Entry

Applies when acquisition exceeds $3000 except when set-aside for small business or when the supplies will be shipped directly from a source outside the U.S. to a customer outside the U.S.
252.225-7015 - Restriction on Acquisition of Hand or Measuring Tools
252.225-7021 - Trade Agreements
252.225-7033 - Waiver of United Kingdom Levies
252.225-7036 - Buy American Act – Free Trade Agreements – Balance of Payments Program
252.225-7041 - Correspondence in English

Applies to solicitations/orders when contract performance will be wholly or in part in a foreign country.
252.222-7007 - Representation Regarding Combatting Trafficking in Persons
252.244-7000 - Sub Contracts for Commercial Items and Commercial Components (DOD Contracts)
252.246-7007 – Contractor Counterfeit Electronic Part Detection and Avoidance System
252.249-7002 - Notification of Anticipated Contract Termination or Reduction